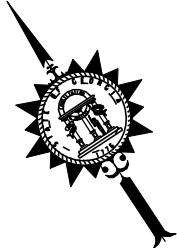


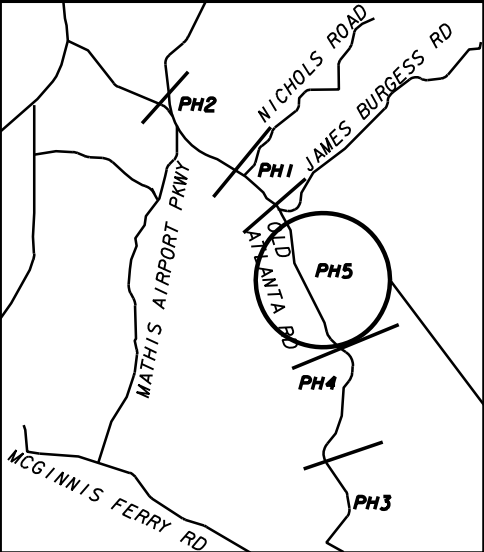
FORSYTH COUNTY
ENGINEERING DEPARTMENT

PLAN AND PROFILE OF PROPOSED
OLD ATLANTA ROAD
WIDENING FROM SHARON ROAD TO MCGINNIS FERRY ROAD
PHASE 5
FORSYTH COUNTY
PROJECTS WID 0208-1



GRESHAM
SMITH AND
PARTNERS

GRESHAM, SMITH & PARTNERS
2325 LAKEVIEW PARKWAY
SUITE 300
ALPHARETTA, GA 30004
PHONE No. (770) 754-0755



VICINITY MAP

THIS PROJECT IS IN ENGLISH UNITS
NOTE: THE CO-ORDINATES LISTED ARE GEORGIA WEST ZONE
GRID CO-ORDINATES BASED ON THE GA. STATE PLANE
CO-ORDINATE SYSTEM OF GA. WEST.
HORIZONTAL DATUM : NAD 83/94
VERTICAL DATUM : NAVD 1988

MIDPOINT COORDINATE
STATION 221+50.00
N 1488055.20
E 2306519.53
LAT 34.0906660°
LONG -084.1338465°

BEGIN PROJECT
PN WID 0208-1
STA. 180+00.00
N 1491903.02
E 2305242.15

DESIGN DATA FOR OLD ATLANTA ROAD
TRAFFIC A.D.T.: 20,900 (2012)
TRAFFIC A.D.T.: 35,850 (2032)
TRAFFIC D.H.V.: 3,755 (2032)
DIRECTIONAL DIST.: 55/45
% TRUCKS: 7%
SPEED DESIGN : 45 MPH

LENGTH OF PROJECT	COUNTY NO.
	117
	MILES
NET LENGTH OF ROADWAY	1.57
NET LENGTH OF BRIDGES	0.00
NET LENGTH OF PROJECT	1.57
NET LENGTH OF EXCEPTIONS	0.00
GROSS LENGTH OF PROJECT	1.57

OLD ATLANTA ROAD
STA. 183+56.23 =
JAMES BURGESS ROAD
STA. 10+00.00

OLD ATLANTA ROAD
STA. 183+62.19
FIRE STATION ACCESS ROAD
20+00.00

END PROJECT
PN WID 0208-1 (PHASE 5)
STA 263+00.00

END CONSTRUCTION
STA 262+00.00

PHASE 5
TIE TO EXIST PHASE 4
STA 260+00.00

NON-BUFFERED
STATE WATER
(ES 4)

STREAM 5
STREAM 6

THIS PROJECT IS LOCATED 100% IN FORSYTH COUNTY
AND CONGRESSIONAL DISTRICT 09.
PROJECT DESIGNATION : EXEMPT
FUNCTIONAL CLASSIFICATION : MINOR ARTERIAL STREET

PLANS PREPARED BY: SARAH E. WORACHEK, P.E.



PLANS COMPLETED DATE: FEBRUARY 27, 2015

REVISION DATES:

4-22-20					

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 COUNTY OF
FORSYTH IN ANY WAY. THE ATTENTION OF BIDDER IS SPECIFICALLY DIRECTED TO SUBSECTIONS 102.04, 102.05,
AND 104.03 OF THE SPECIFICATIONS.

			COUNTY	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
			FORSYTH	WID 0208-1		

INDEX		
	DESCRIPTION	DRAWING NUMBERS
	COVER	1-01
	INDEX	2-01
	REVISION SUMMARY	3-01
	GENERAL NOTES	4-01 TO 4-04
	TYPICAL SECTIONS	5-01 TO 5-03
	SUMMARY OF QUANTITIES	6-01 TO 6-05
	QUANTITIES (AMENDMENT)	7-01
	QUANTITIES (CONSTRUCTION)	8-01
	DETAILED ESTIMATE	9-01
	TRAFFIC DIAGRAMS	10-01 TO 10-06
	MAINLINE PLANS	13-01 TO 13-15
	CROSSROAD PLANS	14-01
	MAINLINE PROFILE	15-01 TO 15-14
	CROSSROAD PROFILE	16-01
	DRIVEWAY PROFILES	17-01 TO 17-06
	CONSTRUCTION STAGING PLANS	19-01 TO 19-64
	DRAINAGE AREA MAP	21-01 TO 21-02
	DRAINAGE PROFILES	22-01 TO 22-15
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	CROSS SECTIONS	23-01 TO 23-40
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	WALL ENVELOPES	31-01 TO 31-03
	CONSTRUCTION DETAILS	
	GEORGIA STANDARDS	
	EROSION CONTROL COVER SHEET	50-01
	ESPC GENERAL NOTES	51-01 TO 51-06
	EROSION CONTROL LEGEND AND UNIFORM CODE SHEETS	52-01 TO 52-06
	EROSION CONTROL DRAINAGE AREA MAP	53-01 TO 53-02
	BMP LOCATION DETAILS	54-01 TO 54-51
	WATERSHED MAP / SITE MONITORING	55-01
	EROSION CONTROL CONSTRUCTION DETAIL	56-01 TO 56-08
	RIGHT OF WAY PLANS	RWO1 TO RW25

GEORGIA CONSTRUCTION DETAILS		
	DESCRIPTION	DATE
A-1	DRIVEWAYS WITH TAPERED ENTRANCES- CONCRETE VALLEY GUTTER.	07-11
A-2	CONCRETE VALLEY GUTTER AT STREET INTERSECTION. 6" OR 8" CONCRETE VALLEY GUTTER AT DRIVE. PLACING PAVEMENT ADJACENT TO GUTTER. ADDITIONAL PAVING AT STREET INTERSECTION. 4" CORRUGATED CONCRETE MEDIAN.	07-11
A-3	SPECIAL DETAIL - CONC. SIDEWALK DETAILS, CURB CUT (WHEELCHAIR) RAMPS	06-09
A-4	DETECTABLE WARNING SURFACE TRUNCATED DOME SIZE, SPACING AND ALIGNMENT REQUIREMENTS	06-09
D-4	DITCH DROP INLET	10-00
D-7	BERM DITCHES, SIDE DITCHES, SURFACE DETAILS	07-80
D-10	4" CONCRETE DITCH PAVING DETAILS & QUANTITIES	01-88
D-15	TYPICAL SKEWED CULVERT ENDS	12-83
D-19	TEMPORARY PIPE SLOPE DRAIN WITH DRAIN INLET	02-00
D-33	TYPE 'V' INLET; 'V' GUTTER DETAILS	08-13
M-3A	CONSTRUCTION DETAILS OF MEDIAN CROSSOVERS	04-10
T-01	SIGN PLATES	01-00
T-02	TYPICAL FRAMING	03-00
T-03a	TYPE 7, 8, AND 9 SQUARE TUBE POST INSTALLATION DETAIL	07-02
T-5a	DETAILS OF REGULATORY SIGNS	01-03
T-5B	DETAILS OF REGULATORY SIGNS	01-00
T-11a	DETAILS OF PAVEMENT MARKING PLACEMENT NON-LIMITED ACCESS ROADWAY	01-00
T-12a	ARROW LOCATIONS	01-00
T-12b	MARKING ARROWS	04-00
T-13a	PAVEMENT MARKING WORDS	01-00
T-14	DETAIL OF PAVEMENT MARKING AND HATCHING	11-08
T-15A	DETAILS OF RAISED PAVEMENT MARKER LOCATION NON-LIMITED ACCESS ROADWAY	01-04
T-15C	DETAILS OF RAISED PAVEMENT MARKERS	09-11
T-20	TRAFFIC CONTROL PEDESTRIAN ACCESSIBILITY AROUND WORKZONE-SIDEWALK DIVERSION	10-08
T-21	TRAFFIC CONTROL PEDESTRIAN ACCESSIBILITY AROUND WORKZONE-SIDEWALK DETOUR	10-08
T-22	TRAFFIC CONTROL PEDESTRIAN ACCESSIBILITY AROUND WORKZONE-MIDBLOCK CROSSING AND SIDEWALK DETOUR	10-08
TS-01	INDUCTIVE-LOOP DETECTOR INSTALLATION	04-10
TS-02	PULLBOX ASSEMBLY AND INSTALLATION	04-10
TS-03	CABINET BASE DETAIL	04-10
TS-03a	PEDESTRIAN FACILITIES INSTALLATION	04-10
TS-05	DETAILS OF CONCRETE POLES	04-10
TS-07	GROUNDING DETAILS FOR TRAFFIC SIGNAL SUPPORT STRUCTURES	04-10
TS-08	UTILITY CLEARANCE DETAIL	04-10
TS-09	STANDARD GUYING DETAILS	04-10
TS-12B	FLASHING SCHOOL ASSEMBLY POST MOUNTED INSTALLATION	02-12

GEORGIA STANDARDS		
	DESCRIPTION	DATE
1001-B	PIPE CULVERT CONCRETE HEADWALL	08-99
1011-A	PRECAST REINFORCED CONCRETE MANHOLE	06-75
1019-A	STANDARD DROP INLETS (BUILT-IN-PLACE)	08-99
1030-D	CONCRETE AND METAL PIPE CULVERTS (SHEET 1 OF 3)	09-01
1030-D	CONCRETE AND METAL PIPE CULVERTS (SHEET 2 OF 3)	09-01
1030-D	CONCRETE AND METAL PIPE CULVERTS (SHEET 3 OF 3)	09-01
1033-D	CATCH BASINS (FOR USE WITH 6" OR 8" HT. CURB AND GUTTER)	08-82
1033-G	CATCH BASINS (FOR USE WITH 6" MOUNTABLE CURB AND GUTTER)	12-85
1034-D	CATCH BASINS (FOR USE WITH 6" OR 8" CURB AND GUTTER IN SAGS OR LOW POINTS)	08-82
1034-G	CATCH BASINS- FOR USE WITH CURB (6" MOUNTABLE) AND GUTTER (IN SAGS OR LOW POINTS)	12-85
1120	FLARED END SECTIONS FOR PIPES	06-06
1125	INLET HEADWALL - OUTWALL HEADWALL	10-99
1401	PAVEMENT PATCHING DETAILS	08-99
2317	DETAILS FOR EXTENDING CONCRETE BOX CULVERTS	01-66
2318	DETAILS FOR EXTENDING CONCRETE BOX CULVERTS WITH SKEWS BELOW 75	07-78
2323	REINFORCED CONCRETE BOX CULVERTS SINGLE 7' X 4' TO SINGLE 9' X 10' FOR DEPTHS OF FILL UP TO 20 FEET (2 SHEETS)	11-01
2330	REINFORCED CONCRETE BOX CULVERTS SINGLE 10'X4' TO TRIPLE 10'X12' FOR 75, 60 AND 45 SKEWS (4 SHEETS)	11-01
2331	REINFORCED CONCRETE BOX CULVERT WINGWALLS AND PARAPETS QUANTITIES SINGLE 3'X2' TO TRIPLE 10'X12' FOR 75, 60 AND 45 SKEWS	11-01
2332A&B	CONCRETE BOX CULVERT APRONS, BAFFLES AND INLET BEVELING DETAIL AND ADJACENT BOX CULVERT JOINT DETAIL (2 SHEETS)	06-98
3626	ONE PIPE ALUMINUM HANDRAILING FOR BRIDGES	10-85
4000W	GUARDRAIL WARRANT GUIDES	09-07
4270	*T*BEAM GUARDRAIL	11-99
4360	REFLECTORIZED GUARDRAIL WASHERS AND ANCHORAGE NOSE STRIPING	04-06
4380	*W* BEAM GUARDRAIL 31 INCH GUARDRAIL HEIGHT	08-11
4381	POSTS AND OFFSET BLOCKS FOR *W* & *T* BEAM GUARDRAIL 31 INCH GUARDRAIL HEIGHT	08-11
4382	GUARDRAIL CONNECTION AT BRIDGE END OR AT CONCRETE BARRIER END FOR 31 INCH HIGH GUARDRAIL	08-11
4383	GUARDRAIL ANCHORAGE TYPE 1 31 INCH GUARDRAIL HEIGHT	08-11
4384	TYPE 12 31 INCH GUARDRAIL HEIGHT	08-11

GEORGIA STANDARDS		
	DESCRIPTION	DATE
4385	*T* BEAM GUARDRAIL CONNECTION TO 31 INCH HEIGHT *W* BEAM	08-11
4386	GUARDRAIL LOCATIONS IN MEDIANS GUARDRAIL LOCATIONS AT TURNOUTS 31 INCH GUARDRAIL HEIGHT.	08-11
4387	GUARDRAIL LOCATION DETAILS FOR MULTI-LANE DIVIDED HIGHWAYS (WITH SHOULDERS ADJACENT TO ROADWAY) 31 INCH GUARDRAIL HEIGHT.	08-11
4390	*W* BEAM GUARDRAIL TRANSITION 27 INCH GUARDRAIL TO 31 INCH GUARDRAIL HEIGHT	08-11
4391	GUARDRAIL LOCATION ON ROADS WITH CURB & GUTTER. HEADER CURB OR INTEGRAL CURB) 31 INCH GUARDRAIL HEIGHT.	08-11
4940	CONCRETE MEDIAN BARRIER - PERMANENT (TYPES 20, 21 AND 7-M AND CONC. GLARE SCREENS)	10-85
4948B	CONCRETE SIDE BARRIER TYPES 2, 2-A, 2-B, AND 2-C	01-07
4960	CONCRETE BARRIER TEMPORARY	05-07
4961	DETAILS OF PRECAST TEMPORARY BARRIERS	09-06
4962	TEMPORARY TRAFFIC IMPACT ATTENUATOR - SAND LOADED MODULES	05-99
9003	RIGHT OF WAY MARKERS	04-06
9031L	RETAINING WALL TYPICAL SECTIONS, RAISING HEADWALL, AND TYPICAL PIPE PLUG (2 SHEETS)	06-98
9031L	DETAILS OF: CATCH BASINS MODIFIED FOR DOUBLE GRATES - CONCRETE CATCH BASINS OF DROP INLET, ONNECTION TO CONCRETE BOX CULVERT - CONCRETE, COVER FOR DROP INLET - CONCRETE STEPS - CONCRETE SPRING BOX - RETAINING WALL TYPICAL SECTIONS, RAISING HEADWALL - TYPICAL PIPE PLUG	06-98
9031R	PLACING ROOF DRAIN PIPE UNDER UNDER SIDEWALK - RAMP TYPE BARRICADE - PIPE HANDRAIL FOR RETAINING WALL PIPE HANDRAIL FOR CONCRETE STEPS.	10-88
9031S	MEDIAN DROP INLET (PRECAST OR BUILT-IN-PLACE) & CONC APRON	04-96
9031T	ISOMETRIC VIEW OF SIDE ROAD OR DRIVE FLARE DETAILS AT BRIDGE ENDS	08-95
9031U	JUNCTION BOXES	07-85
9032B	CONCRETE CURB & GUTTER CONCRETE CURBS, CONCRETE MEDIANS	11-11
9100	TRAFFIC CONTROL GENERAL NOTES, STANDARD LEGEND, AND MISCELLANEOUS DETAILS	03-06
9102	TRAFFIC CONTROL DETAIL FOR LANE CLOSURE ON TWO-LANE HWY	03-06

[illegible]

REVISION DATES		
4-22-20		

FORSYTH COUNTY
ENGINEERING DEPARTMENT

INDEX

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No. 2-1


2-01


\$DATE\$	\$TIME\$	\$PRF\$	\$DGN\$	COUNTY	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
\$USER		\$TBL\$		FORSYTH	WID 0208-1		

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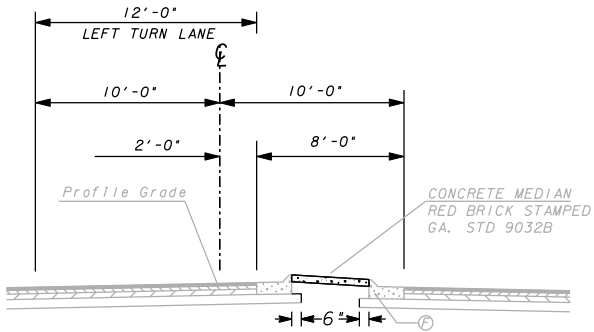
REVISION DATES			FORSYTH COUNTY ENGINEERING DEPARTMENT	
			REVISION SUMMARY WID 0208-1 (PHASE 5) FORSYTH COUNTY	
			DRAWING No. 3-02	

DATE TIME \$\$\$		TIME \$\$\$	PRF \$	SGN \$	COUNTY	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS	
\$USER\$		\$PENTABLE\$			FORSYTH	WID 0208-1			
<div>GENERAL NOTES</div> <div>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.</div> <div>2. SPECIAL ROADSIDE SIGNS SHALL BE FABRICATED USING ALUMINUM BOLTED EXTRUDED PANELS.</div> <div>3. BACKGROUND FOR SPECIAL ROADSIDE SIGNS SHALL BE STANDARD INTERSTATE GREEN, TYPE III (ENCAPSULATED LENS), REFLECTIVE SHEETING, UNLESS SPECIFIED OTHERWISE IN THE PLANS.</div> <div>4. LEGENDS FOR SPECIAL ROADSIDE SIGNS SHALL BE WHITE, TYPE IX (PRISMATIC LENS), REFLECTIVE SHEETING LETTERS, NUMERALS, SYMBOLS, AND BORDERS ON 0.032 INCH ALUMINUM CUTOUTS.</div> <div>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 IX (PRISMATIC LENS), REFLECTIVE SHEETING BACKGROUNDS WITH NO BORDERS. INTERSTATE SHIELDS SHALL BE PER THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITION.</div> <div>6. FOR DETAILS OF U.S. AND INTERSTATE SHIELDS AND ARROWS, REFER TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITION.</div> <div>7. LEGENDS FOR SPECIAL ROADSIDE SIGNS SHALL BE FASTENED TO SIGN PANELS WITH ALUMINUM PULL THROUGH BLIND RIVETS OR WITH AN APPROVED NON-CORROSIVE FASTENER.</div> <div>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.</div> <div>9. FOR ASSEMBLY DETAILS AND ASSEMBLY COMPONENTS DETAILS ON ALUMINUM BOLTED EXTRUDED PANELS, REFER TO GEORGIA STANDARDS 9041 AND 9042.</div> <div>10. FOR DETAILS OF SPECIAL ROADSIDE SIGNS SEE DETAILS OF SPECIAL ROADSIDE SIGNS.</div> <div>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 FORSYTH COUNTY IN WRITING.</div> <div>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.</div> <div>13. POST LENGTHS, POST SIZES, AND FOOTING SIZES FOR SPECIAL ROADSIDE SIGNS ARE ESTIMATED, ONLY. IT SHALL BE THE RESPONSIBILITY OF THE CONSTRCTOR 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.</div> <div>14. THE NEAR EDGE OF SIGNS ERECTED BEHIND GUARDRAIL SHALL BE 6 FEET BEHIND THE FACE OF THE GUARD RAIL.</div>									
				 <div>G R E S H A M S M I T H A N D P A R T N E R S</div>	REVISION DATES			FORSYTH COUNTY DEPARTMENT OF TRANSPORTATION	
								GENERAL NOTES	
							WID 0208-1 FORSYTH COUNTY		
							DRAWING No. 4-02		

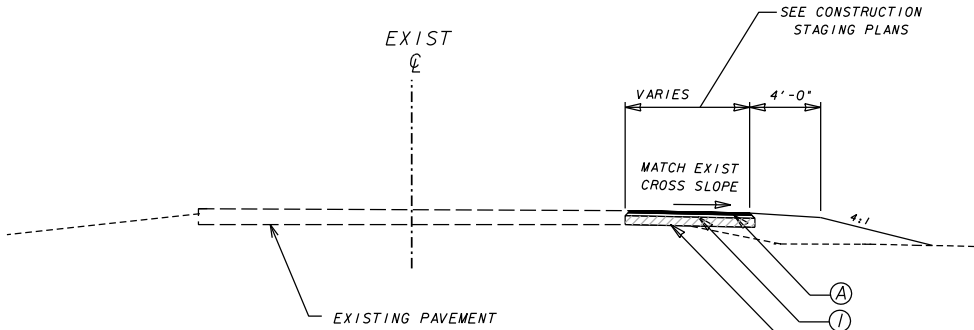
DATE TIME \$\$\$		TIME \$\$\$	\$PRF\$	\$DGN\$	COUNTY	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS	
\$USER\$					FORSYTH	WID 0208-1			
GENERAL NOTES - STANDARD SIGNS									
<div><div>1. ALL STANDARD HIGHWAY SIGNS SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE DETAILS SHOWN IN THE PLANS, THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITION, AND THE GEORGIA SPECIFICATIONS, SUPPLEMENTAL SPECIFICATIONS, AND/OR SPECIAL PROVISIONS.</div><div>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 FORSYTH COUNTY.</div><div>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.</div><div>4a. HORIZONTAL CLEARANCE FOR STANDARD HIGHWAY SIGNS ON NON INTERSTATE 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).</div><div>4b. HORIZONTAL CLEARANCE FOR STANDARD HIGHWAY SIGNS MOUNTED BEHIND GUARD RAIL SHALL BE 6 FEET FROM THE FACE OF THE GUARD RAIL TO THE NEARER EDGE OF THE SIGN(S).</div><div>5. SINGLE PLATE, HORIZONTAL RECTANGULAR SIGNS OVER 48 INCHES IN WIDTH SHALL BE MOUNTED ON TWO POSTS WITH 2 EACH 2 INCH x 1/2 INCH x (WIDTH OF SIGN) ALUMINUM OR GALVANIZED STEEL STRAPS. THE STRAPS SHALL BE FLUSH WITH THE BACK OF THE SIGN WITH ONE EACH ACROSS THE TOP AND BOTTOM OF THE SIGN. THE CENTERLINE OF EACH POST SHALL BE INSET 1/6TH OF THE SIGN WIDTH FROM THE EDGE OF THE SIGN. SIGN PLATE BOLT HOLES SHALL BE 3/8 INCH DIAMETER, DRILLED OR PUNCHED, AS SHOWN ON THE SIGN PLATE DETAILS.</div><div>6. EACH 42 OR 48 INCH WIDE x 18 OR 24 INCH HIGH SIGN REQUIRES ONE 2 INCH x 1/2 INCH x (WIDER OF SIGN) ALUMINUM OR GALVANIZED STEEL STRAP LOCATED IN THE CENTER OF THE SIGN AND FLUSH WITH THE BACK OF THE SIGN.</div><div>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.</div><div>8. TYPE 3 (ENCAPSULATED LENS) 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 PREMISSIBLE.</div><div>9. TYPE 9 (VERY HIGH INTENSITY) REFLECTIVE SHEETING SHALL BE USED FOR ALL RED SERIES SIGNS (R1-1, R1-2, R1-3A, R1-4A, R5-1, R5-1A).</div><div>10. TYPE 9 (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, BICYCLE CROSSING (W11-1) SIGNS, AND PEDESTRIAN CROSSING (W11-2 AND W11A-2) SIGNS. SIGNS WITHIN THE SAME ASSEMBLY AS THE SCHOOL ZONE SIGNS SPECIFICALLY LISTED ABOVE AND ALL REGULATORY SIGNS PLACED AS PART OF THE SCHOOL ZONE SIGNING SHALL HAVE TYPE 1X (VERY HIGH INTENSITY) REFLECTIVE SHEETING BACKWARDS OF THE APPROPRIATE COLOR.</div><div>11. TYPE 9 (VERY HIGH INTENSITY) FLUORESCENT YELLOW REFLECTIVE SHEETING SHALL BE USED FOR ALL WARNING SIGNS.</div><div>12. A 1/2 INCH MINIMUM AIR SPACE SHALL BE REQUIRED BETWEEN ALL SIGN PLATES WITHIN THE ASSEMBLY.</div><div>13. WHERE SIGNS WITHIN AN ASSEMBLY EXTEND BELOW THE STANDARD MOUNTING HOLES ON THE POST(S), ADDITIONAL 1/8 INCH DIAMETER HOLE(S), DRILLED OR PUNCHED, SHALL BE REQUIRED TO PROPERLY MOUNT THE ASSEMBLY.</div><div>14. FOR DETAILS OF SPECIAL DESIGN HIGHWAY SIGNS, SEE DETAILS OF MISCELLANEOUS SIGNS.</div><div>15. THE CONTRACTOR WILL, AS REQUESTED BY FORSYTH COUNTY, BE REQUIRED TO REMOVE ANY EXISTING SIGNS THAT ARE DUPLICATED OR ARE CONTRARY TO THESE SIGN PLANS.</div></div>									
				 <div>GRESHAM SMITH AND PARTNERS</div>	REVISION DATES			FORSYTH COUNTY DEPARTMENT OF TRANSPORTATION	
								GENERAL NOTES	
							WID 0208-1 FORSYTH COUNTY		
							DRAWING No. 4-03		

DATE TIME \$\$\$		TIME \$\$\$	\$PRF\$	\$DGN\$		COUNTY	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS																		
\$USER\$		\$PENTABLE\$				FORSYTH	WID 0208-1																				
TRAFFIC SIGNAL GENERAL NOTES																											
<div><div><div>1.</div><div>THE COMPLETE SIGNAL INSTALLATION SHALL CONFORM TO ALL APPROPRIATE PARTS OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES CURRENT EDITION.</div></div><div><div>2.</div><div>SIGNAL HEADS SHALL BE ERECTED TO PROVIDE AT LEAST 17 FEET BUT NO MORE THAN 19 FEET CLEARANCE FROM BOTTOM OF SIGNAL HEADS TO TOP OF ROAD SURFACE AND A MINIMUM OF 8 FEET MEASURED HORIZONTALLY BETWEEN CENTERS OF SIGNAL FACES.</div></div><div><div>3.</div><div>SHIELDED CABLE WILL BE USED FOR DETECTOR RUNS AS SHOWN ON THE DETAIL SHEET, DETECTORS SHALL HAVE SEPERATE LEAD-INS TO THE CONTROL CABINET.</div></div><div><div>4.</div><div>THE CONTRACTOR SHALL LOCATE UNDERGROUND UTILITIES IN VICINITY OF NEW TRAFFIC SIGNAL POLES BEFORE INSTALLATION. AT THE DISCRETION OF THE ENGINEER, MINOR SHIFTS, (UP TO A MAXIMUM OF 5 FEET), IN LOCATION OF NEW SIGNAL POLES, ARE ACCEPTABLE TO AVOID UNDERGROUND UTILITIES. MINUMUM CLEARANCES FROM EDGE OF PAVEMENT SHALL BE MAINTAINED. PLACEMENT OF THE SIGNAL HEADS SHALL BE RETAINED AS SHOWN ON THE PLANS.</div></div><div><div>5.</div><div>THE CONTRACTOR SHALL MAINTAIN EXISTING TRAFFIC SIGNALS DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRAFFIC SIGNAL AND/OR CONTROL SYSTEM ADJUSTMENTS, INCLUDING TEMPORARY SUPPORT POLE LOCATION(S) REQUIRED BY THE PROJECT DURING THE INTERIM PERIOD THROUGH INSTALLATION OF NEW SIGNAL EQUIPMENT. AT NO TIME SHALL THE CONTRACTOR CAUSE ANY PART OF THE SIGNAL OPERATION TO BE INOPERABLE.</div></div><div><div>6.</div><div>THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL NEW GUYS ON EXISTING UTILITY TIMBER POLES WHEN ATTACHING SPAN WIRE OR INTERCONNECT CABLE TO THE POLES UNLESS OTHERWISE DIRECTED BY THE ENGINEER.</div></div><div><div>7.</div><div>INSTALLATION IS TO BE CHECKED AND ACCEPTED BY THE FORSYTH COUNTY TRAFFIC ENGINEER PRIOR TO FINAL ACCEPTANCE.</div></div><div><div>8.</div><div>WHEN REMOVED, EXISTING EQUIPMENT SHALL BE DELIVERED BY THE CONTRACTOR TO FORSYTH COUNTY OPERATIONS DISTRICT SIGNAL SHOP. CONTACT THE COUNTY SIGNAL ENGINEER AT (770) 781-2165</div></div><div><div>9.</div><div>FOR STRAIN POLE FOUNDATION SIZE AND REINFORCEMENT, SEE STRAIN POLE AND MAST ARM POLE FOUNDATION SHEET.</div></div><div><div>10.</div><div>MATERIAL CERTIFICATION IS REQUIRED PRIOR TO BEGINNING ANY SIGNAL INSTALLATION WORK. THE CONTRACTOR SHALL FOLLOW PROCEDURES OUTLINED IN THE DOT SPECIFICATION.</div></div><div><div>11.</div><div>ALL EXISTING STOP BARS AND CROSSWALKS THAT ARE NOT REMOVED OR RELOCATED SHALL BE IN ACCORDANCE WITH CURRENT DOT STANDARDS.</div></div><div><div>12.</div><div>PROPOSED SIGNAL SUPPORT WIRE ATTACHMENT HEIGHTS ON POLES ARE PROVIDED AS GENERAL GUIDELINES TO INSTALLER, ACTUAL ATTACHMENT HEIGHTS SHALL BE FIELD DETERMINED BY INSTALLER TO PROVIDE REQUIRED SIGNAL HEAD MOUNTING HEIGHTS AND CLEARANCE FROM EXISTING UTILITIES.</div></div><div><div>13.</div><div>SAWCUTS AND REMOVAL OF ALL CONCRETE ASSOCIATED WITH CURB CUT RAMPS SHALL BE INCLUDED IN THE SIDEWALK PAY ITEM.</div></div><div><div>14.</div><div>THE CONTRACTOR SHALL REPLACE IN KIND AND SIZE, AT NO SEPARATE EXPENSE TO THE DEPARTMENT, ANY BARRIER WALL, FENCE, DITCH PAVING, CURBING, SIDEWALK, GUTTER, SLOPE PAVEMENT, SIGNS, GUARDRAILS, LANDSCAPING, GRASSINGS, UTILITY SERVICE LINES, STORM DRAIN PIPES, MASONRY WALLS AND PAVING THAT IS REMOVED, DAMAGED OR DESTROYED, AS A RESULT OF CONTRACTOR NEGLIGENCE</div></div><div><div>15.</div><div>THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL PERTINENT EROSION CONTROL. THESE MEASURES SHALL BE IMPLEMENTED AND MAINTAINED FOR THE DURATION OF THE WORK.</div></div><div><div>16.</div><div>ANY TRAFFIC MARKING, SYMBOLS OR STRIPING TO BE REMOVED SHALL BE PAID FOR IN THE TRAFFIC CONTROL LUMP SUM ITEM.</div></div></div>																											
								<div>REVISION DATES</div> <table><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr></table>																			
						FORSYTH COUNTY DEPARTMENT OF TRANSPORTATION		<div>GENERAL NOTES</div>																			
						WID 0208-1 FORSYTH COUNTY		DRAWING No. 4-04																			

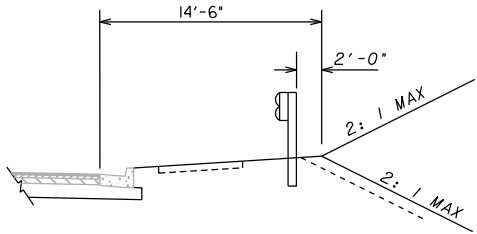
GPLM



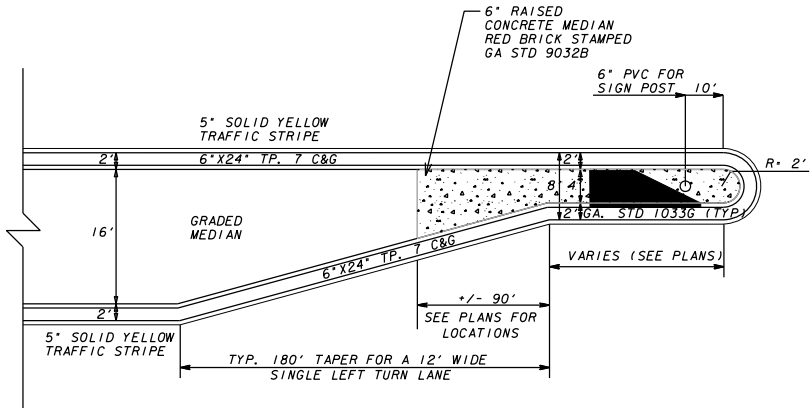
TYPICAL FOR MEDIAN TURN LANE
SEE PLANS FOR LOCATIONS



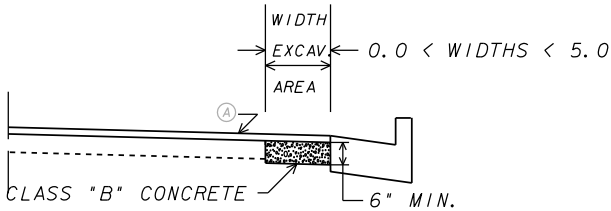
TEMP PAVEMENT DETAIL
SEE PLANS FOR LOCATION



TYPICAL SHOULDER DETAIL FOR GUARDRAIL WITH SIDEWALK
SEE PLAN FOR LOCATION



LEFT TURN LANE TYPICAL FOR RAISED MEDIAN
SEE PLANS FOR LOCATIONS



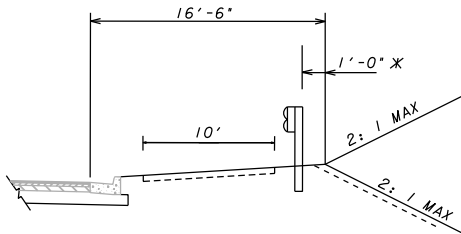
NO SCALE
CLASS "B" CONCRETE BASE OR PAVEMENT WIDENING
Item Code 500-9999 - Cu. Yds.

PAVEMENT WIDENING DETAIL

In excavated areas between the existing paving and new curb and gutter that are 5'-0" or less in width, Class "B" concrete shall be placed in lieu of the base and paving specified by the typical section. Payment will be made under "Class B Concrete Base and Pavement Widening".

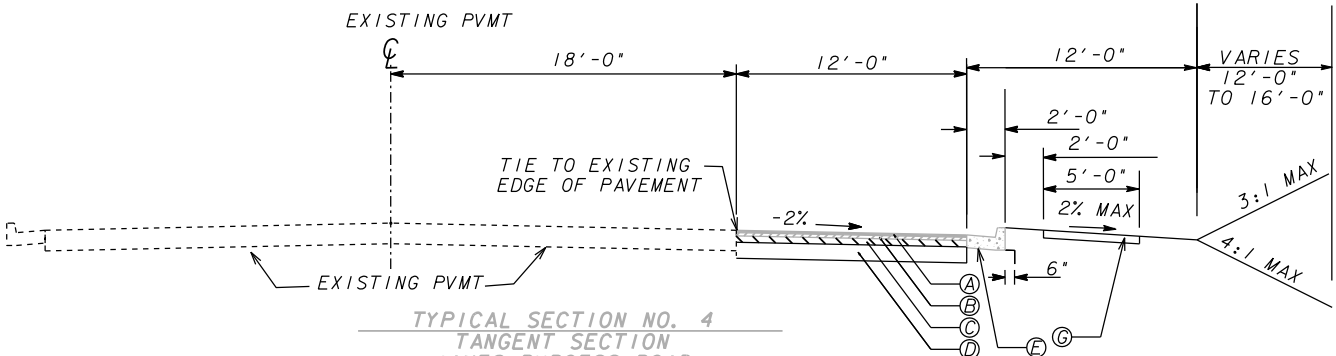
In excavated areas greater than 5'-0" in width, the Contractor shall place base and paving as specified on the typical section.

See plans for details of curb and gutter construction.



*WHEN USING LESS THAN 2'-0" BEHIND GUARDRAIL, USE ADDITIONAL LENGTH POST (STD 4381)

TYPICAL SHOULDER DETAIL FOR GUARDRAIL WITH MULTIUSE TRAIL
SEE PLAN FOR LOCATION



TYPICAL SECTION NO. 4
TANGENT SECTION
JAMES BURGESS ROAD
STA. 12+00 TO STA. 16+05.95

- A RECYCLED ASPHALTIC CONCRETE 12.5 mm, SUPERPAVE, GP 2 ONLY, INCL. BITUM MAT'L & H. LIME (165 LB/SQ. YD.)
B RECYCLED ASPHALTIC CONCRETE 19 mm, SUPERPAVE, GP 1 OR 2, INCL. BITUM MAT'L & H. LIME (220 LB/SQ. YD.)
C RECYCLED ASPHALTIC CONCRETE 25 mm, SUPERPAVE, GP 1 OR 2, INCL. BITUM MAT'L & H. LIME (440 LB/SQ. YD.)
D GRADED AGGREGATE BASE, 10 IN
E CONCRETE CURB & GUTTER - 6 IN X 24 IN, GA STD. 9032B, TYPE 2
F CONCRETE CURB & GUTTER - 6 IN X 24 IN, GA STD. 9032B, TYPE 7
G CONCRETE SIDEWALK, 4", GA. STD. 9031-W
H RECYCLED ASPHALTIC CONCRETE 25 mm, SUPERPAVE, GP 1 OR 2, INCL. BITUM MAT'L & H. LIME (330 LB/SQ. YD.)
I GRADED AGGREGATE BASE, 8 IN

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

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

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

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

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

DRIVEWAYS

REVISION DATES			FORSYTH COUNTY ENGINEERING DEPARTMENT	
4-17-20			TYPICAL SECTIONS	
			WID 0208-1 (PHASE 5) FORSYTH COUNTY	
			DRAWING No. 5-03	

TRAFFIC CONTROL WID 0208-1	
TOTAL	LUMP SUM

GRADING COMPLETE WID 0208-1	
TOTAL	LUMP SUM

CONC SIDEWALK, 4 IN	
TOTAL	13445 SY

CONC CURB & GUTTER 6 IN X 24 IN, TP 2	
TOTAL	16374 LF

CONC CURB & GUTTER 6 IN X 24 IN, TP 7	
TOTAL	12168 LF

CONCRETE VALLEY GUTTER, 6"	
TOTAL	385 SY

RIGHT OF WAY MARKERS	
TOTAL	122 EA

TEMPORARY BARRIER, METHOD NO. 1	
TOTAL	650 LF

PORTABLE IMPACT ATTENUATOR, TYP B	
EA	2

FOUNDATION BACKFILL, TYPE 2	
TOTAL	185 CY

DRIVEWAY CONCRETE, 6 IN TK	
TOTAL	236 SY

DRIVEWAY CONCRETE, 8 IN TK	
TOTAL	244 SY

FLOWABLE FILL	
TOTAL	9 CY

CHANGEABLE MESSAGE SIGN, PORTABLE TYPE 3	
EACH	2

SURFACING QUANTITIES							
ITEMS	UNIT	ROADWAYS	Side Roads	DRIVEWAYS	TEMPORARY PAVEMENT	AS DIRECTED	TOTALS
RECYCLED ASPHALT CONC. 12.5 mm SUPERPAVE, GP 2 ONLY, INCL BITUM MATL & H LIME	TN	4700	86	301	377	162	5575
RECYCLED ASPHALT CONC. 19 mm SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME	TN	5698	115	290	753	204	6991
RECYCLED ASPHALT CONC. 25 mm SUPERPAVE, GP 1 OR 2, INCL BITUM MATL & H LIME	TN	11764	229	0	0	353	11738
GRADED AGGR. BASE COURSE, INCL MATL	TN	33337	569	1240	2055	1103	37870
BITUMINOUS TACK COAT	GL	5435	84	142	228	174	5991
RECYCLED ASPHALT CONC. LEVELING, INCL BITUM MATL & H LIME	TN	0	0	0	0	100	100
MILL ASPHALT CONCRETE PAVEMENT 1.5" DEPTH	SY	5107	0	0	0	153	5260
AGGREGATE SURFACE COURSE	TN	0	150	0	0	100	100
CLASS B CONCRETE, PVMT WIDENING	CY	10	0	0	0	1	11

EROSION CONTROL QUANTITIES				
TEMPORARY EROSION CONTROL				
ITEM	UNIT	QUANTITY	AS DIRECTED BY ENGINEER	TOTAL
WATER QUALITY MONITORING AND SAMPLING	EA	3	0	3
TEMPORARY SILT FENCE, TYPE C	LF	12023	344	12367
MAINTENANCE OF TEMPORARY SILT FENCE, TP C	LF	5739	172	5910
CONSTRUCT AND REMOVE FABRIC CHECK DAMS	LF	522	17	570
CONSTRUCT AND REMOVE ROCK FILTER DAMS	EA	34	1	35
MAINTENANCE OF ROCK FILTER DAM	EA	34	1	35
CONSTRUCT AND REMOVE STONE FILTER RING	EA	6	1	7
MAINTENANCE OF STONE FILTER RING	EA	6	1	7
MAINTENANCE OF CHECK DAMS- ALL TYPES	LF	552	17	570
CONSTRUCT AND REMOVE INLET SEDIMENT TRAP	EA	101	3	104
MAINTENANCE OF INLET SEDIMENT TRAP	EA	101	3	104
CONSTRUCT AND REMOVE SILT CONTROL GATE TYPE 3	EA	6	1	7
MAINTENANCE OF SILT CONTROL GATE TYPE 3	EA	6	1	7
CONSTRUCTION EXIT	EA	16	1	17
MAINTENANCE OF CONSTRUCTION EXIT	EA	16	1	17
CONSTRUCT AND REMOVE TEMP PIPE SLOPE DRAIN	LF	112	3	115
WATER QUALITY INSPECTION	MO	12	0	12
PERMANENT EROSION CONTROL				
ITEM	UNIT	QUANTITY	AS DIRECTED BY ENGINEER	TOTAL
TURF REINFORCING MATTING, TP 1	SY	2115	63	2180
TURF REINFORCING MATTING, TP 2	SY	1787	54	1840
TURF REINFORCING MATTING, TP 3	SY	907	27	930
EROSION CONTROL MATS, SLOPES	SY	52426	1424	53850

MSE MODULAR BLOCK WALLS			
Wall #	0-10 HT (SF)	10-20 HT (SF)	TOTAL (SF)
1	2333	2012	4345
3	858		858
4	4089		4089
5	3237	706	3943
6	663		663
7	317	959	1276
Sub Total	11497	3677	
As Directed	345	110	
Total	11842	3787	

GA STD 4948B WALLS						
Wall #	Type 2B			Type 2C		
	From Station	To Station	LF	From Station	To Station	LF
	198+55	198+79	24.00	198+79	199+25	46.00
	199+25	200+00	75.00			0.00
Sub Total			99			46
As Directed			3			2
Total			102			48
WALLS TO BE DESIGNED & CONSTRUCTED BY CONTRACTOR						
Wall #	From Station	To Station	LF			
8	256+00	259+43	343			

GUARDRAIL			
W-BEAM GUARDRAIL			
STATION	LENGTH (FT)	TYPE 1 ANCHOR (EA)	TYPE 12 ANCHOR (EA)
187+00 TO 188+00	100	1	1
189+29 TO 192+56	327	1	1
193+00 TO 194+80	180	1	1
194+00 TO 194+26	26		1
200+00 TO 202+50	250	1	1
201+35 TO 202+45	110		1
217+00 TO 219+00	200	1	1
219+11 TO 222+50	339	1	1
234+90 TO 236+62	172	1	1
238+00 TO 238+98	98	1	1
240+38 TO 242+36	198	1	1
244+00 TO 245+50	150	1	1
245+39 TO 246+72	133	1	1
246+50 TO 250+40	390	1	1
248+26 TO 249+00	74	1	1
257+17 TO 258+55	138		1
WALLS			2
SUB-TOTAL	2885	13	18
AS DIRECTED	87	0	0
TOTAL	2972	13	18

CONCRETE MEDIAN			
ITEMS	QUANTITY	AS DIRECTED	TOTALS
6" CONCRETE MEDIAN (SY)	1682	50	1733
7.5" DOWELED ISLAND/MEDIAN (SY)	1588	48	1636

GRASSING ITEMS					
GRASSNG	AGRICUL-TURAL LIME	FERTILIZER MIXED GRADE	FERTILIZER NITROGEN CONTENT	MULCH	BLOCK SOD
ITEM	UNIT	QUANTITY	TON	TON	LB
PERMANENT GRASSING	AC	11	33	7	550
TEMPORARY GRASSING	AC	6	0	1	0
ANNUAL APPLICATION					
DISTURBED AREA			0	0	0
AS DIRECTED BY ENGINEER			2	2	50
TOTAL			35	10	600

REVISION DATES			FORSYTH COUNTY ENGINEERING DEPARTMENT	
4-17-20			SUMMARY OF QUANTITIES	
			WID 0208-1 (PHASE 5) FORSYTH COUNTY	
			DRAWING No. 6-01	



6-03

SUMMARY OF QUANTITIES - STANDARD ROADSIDE SIGNS																											
HIGHWAY SIGNS																				SQUARE TUBE POST							
ROADWAY	STATION	INSTL NO	SIGN CODE	TP 1 MATL, REFL SHEETING TP 3			TP 2 MATL, REFL SHEETING TP 3			TP 1 MATL, REFL SHEETING TP 9			TP 2 MATL, REFL SHEETING TP 9			TP 1 MATL, REFL SHEETING TP			TP 2 MATL, REFL SHEETING TP			TYPE 7			TYPE 8		
				SIZE	QYT	SQ FT	SIZE	QYT	SQ FT	SIZE	QYT	SQ FT	SIZE	QYT	SQ FT	SIZE	QYT	SQ FT	SIZE	QYT	SQ FT	LENGTH (FEET)	QYT	TOTAL LENGTH	LENGTH (FEET)	QYT	TOTAL LENGTH
OLD ATLANTA RD	STA 182+89	1	R1-2							36 TRI	1	3.90								13	1	13					
OLD ATLANTA RD	STA 184+57	2	R5-1							30 x 30	1	6.25								13	1	13					
OLD ATLANTA RD	STA 186+28	3	R5-1A							36 x 24	1	6.00								13	1	13					
OLD ATLANTA RD	STA 187+08	4	S5-1							24 x 48	1	8.00								15	1	15					
OLD ATLANTA RD	STA 187+09	5	R2-1	24 x 30	1	5.00														15	2	30					
			S5-2							24 x 30	1	5.00															
OLD ATLANTA RD	STA 188+00	6	W3-3	36 TRI	1	3.90														15	2	30					
OLD ATLANTA RD	STA 189+00	7	R6-2R	24 x 30	1	5.00														13	1	13					
OLD ATLANTA RD	STA 189+98	8	R5-1							30 x 30	1	6.25								13	1	13					
OLD ATLANTA RD	STA 191+47	9	R6-2R	24 x 30	1	5.00														14	1	14					
OLD ATLANTA RD	STA 191+50	10	R1-2							36 TRI	1	3.90								13	1	13					
OLD ATLANTA RD	STA 192+00	11	R5-1							30 x 30	1	6.25								13	1	13					
OLD ATLANTA RD	STA 193+00	12	W3-3	36 TRI	1	3.90														13	1	13					
OLD ATLANTA RD	STA 193+00	13	W2-2R	36 TRI	1	3.90														13	1	13					
OLD ATLANTA RD	STA 195+47	14	R5-1A							36 x 24	1	6.00								12	1	12					
OLD ATLANTA RD	STA 197+30	15	R4-7	24 x 30	1	5.00														13	1	13					
OLD ATLANTA RD	STA 197+50	16	R5-1							30 x 30	1	6.25								13	1	13					
OLD ATLANTA RD	STA 198+20	17	R1-1							30 O	1	5.18								15	2	30					
			R6-3A	30 X 24	1	5.00																					
OLD ATLANTA RD	STA 198+56	18	R4-7	24 x 30	1	5.00														13	1	13					
OLD ATLANTA RD	STA 198+60	19	R5-1							30 x 30	1	6.25								13	1	13					
OLD ATLANTA RS	STA 200+65	20	R5-1A							36 x 24	1	6.00								12	1	12					
OLD ATLANTA RD	STA 202+50	21	R5-1							30 x 30	1	6.25								13	1	13					
OLD ATLANTA RD	STA 203+18	22	R3-2	24 x 24	1	4.00														12	1	12					
OLD ATLANTA RD	STA 203+23	23	R1-2							36 TRI	1	3.90								13	1	13					
OLD ATLANTA RD	STA 203+10	24	R6-2R	24 x 30	1	5.00														13	1	13					
OLD ATLANTA RD	STA 210+72	25	R5-1A							36 x 24	1	6.00								13	1	13					
OLD ATLANTA RD	STA 212+35	26	R4-7	24 x 30	1	5.00														13	1	13					
OLD ATLANTA RD	STA 212+35	27	R5-1							30 x 30	1	6.25								13	1	13					
OLD ATLANTA RD	STA 213+25	32	R4-7	24 x 30	1	5.00														13	1	13					
OLD ATLANTA RD	STA 213+25	29	R4-7	24 x 30	1	5.00														13	1	13					
OLD ATLANTA RD	STA 214+07	30	R5-1							30 x 30	1	6.25								14	1	14					
OLD ATLANTA RD	STA 214+07	31	R4-7	24 x 30	1	5.00														13	1	13					
OLD ATLANTA RD	STA 216+00	32	R5-1A							36 x 24	1	6.00								13	1	13					
OLD ATLANTA RD	STA 223+67	33	R6-2R	24 x 30	1	5.00														13	1	13					
OLD ATLANTA RD	STA 224+35	34	R5-1A							36 x 24	1	6.00								13	1	13					
OLD ATLANTA RD	STA 225+50	35	W2-1	36 TRI	1	3.90														13	1	13					
OLD ATLANTA RD	STA 229+16	36	R5-1A							36 x 24	1	6.00								12	1	12					
OLD ATLANTA RD	STA 230+23	37	R5-1							30 x 30	1	6.25								13	1	13					
OLD ATLANTA RD	STA 230+61	38	R1-1							30 O	1	5.18								15	2	30					
			R6-3	30 x 24	1	5.00																					
OLD ATLANTA RD	STA 230+89	39	R1-1							30 O	1	5.18								15	2	30					
			R6-3	30 x24	1	5.00																					
OLD ATLANTA RD	STA 231+38	40	R5-1							30 x 30	1	6.25								13	1	13					
OLD ATLANTA RD	STA 232+62	41	R5-1A							36 x 24	1	6.00								12	1	12					
OLD ATLANTA RD	STA 236+00	42	W2-1	36 TRI	1	3.90														13	1	13					
OLD ATLANTA RD	STA 238+00	43	R5-1A							36 x 24	1	6.00								12	1	12					
OLD ATLANTA RD	STA 239+10	44	R5-1							30 x 30	1	6.25								13	1	13					
OLD ATLANTA RD	STA 239+80	45	R1-1							30 O	1	5.18								15	2	30					
			R6-3	30 x 24	1	5.00																					
OLD ATLANTA RD	STA 240+08	46	R1-1							30 O	1	5.18								15	2	30					
			R6-3	30 x 24	1	5.00																					
OLD ATLANTA RD	STA 240+30	47	R560-6	24 x 30	1	5.00														13	1	13					
OLD ATLANTA RD	STA 240+51	48	R1-2							36 TRI	1	3.90								13	1	13					
OLD ATLANTA RD	STA 240+55	49	R5-1							30 x 30	1	6.25								13	1	13					
OLD ATLANTA RD	STA 240+80	50	R5-1A							36 x 24	1	6.00								13	1	13					
OLD ATLANTA RD	STA 242+52	51	R5-1							30 x 30	1	6.25								13	1	13					
OLD ATLANTA RD	STA 243+15	52	R1-1							30 TRI	1	2.71								13	1	13					
OLD ATLANTA RD	STA 243+17	53	R6-2R	24 x 30	1	5.00														13	1	13					
OLD ATLANTA RD	STA 245+00	54	W2-2L	36 TRI	1	3.90														13	1	13					
OLD ATLANTA RD	STA 249+00	55	W2-2R	36 TRI	1	3.90														13							

\$DATE\$

\$USER

\$TIME\$

\$TBL\$

\$DCN\$

COUNTY

FORSYTH

PROJECT NUMBER

WID 0208-1

SHEET NO.

TOTAL SHEETS

REF 105

REF 106

REF 107

REF 108

REF 109

REF 110

REF 111

REF 112

REF 113

REF 114

REF 105

REF 106

REF 107

REF 108

REF 109

REF 110

REF 111

REF 112

REF 113

REF 114

ITEM

UNITS

DESCRIPTION

QUANTITY

150-1000

LS

TRAFFIC CONTROL - WID 0208-1

1

210-0100

LS

GRADING COMPLETE - WID 0208-1

1

310-1101

TN

GR AGGR BASE CRS, INCL MATL

37870

402-1812

TN

RECYL AC LEVELING, INC BM & HL

100

402-3121

TN

RECYL AC 25MM SP, GP 1 / 2, BM & HL

11738

402-3130

TN

RECYL AC 12.5MM SP, GP 2, BM & HL

5575

402-3190

TN

RECYL AC 19 MM SP, GP 1 OR 2 ,INC BM & HL

6991

413-1000

GL

BITUM TACK COAT

5991

432-0206

SY

MILL ASPH CONC PVM T, 1 1/2 IN DEPTH

5260

318-3000

TN

AGGR SURF CRS

100

441-0104

SY

CONC SIDEWALK, 4 IN

13127

441-0016

SY

DRIVEWAY CONCRETE, 6 IN TK

236

441-0018

SY

DRIVEWAY CONCRETE, 8 IN TK

244

441-0748

SY

CONC MEDIAN, 6 IN

1733

441-0754

SY

CONC MEDIAN, 7 1/2 IN

1636

441-4020

SY

CONC VALLEY GUTTER, 6 IN

481

620-0100

LF

TEMPORARY BARRIER, METHOD NO. 1

650

150-5010

EA

PORTABLE IMPACT ATTENUATOR (TYPE B)

2

441-6021

LF

CONC CURB & GUTTER/ 6"x24" TP2

15512

441-6718

LF

CONC CURB & GUTTER, 6"x24", TP 7

12168

500-9999

CY

CLB CONC, BASE OR PVM T WIDEN

11

634-1200

EA

RIGHT OF WAY MARKERS

116

641-1200

LF

GUARDRAIL, TP W

2972

641-5001

EA

GUARDRAIL ANCHORAGE, TP 1

13

641-5012

EA

GUARDRAIL ANCHORAGE, TP 12

18

207-0203

CY

FOUND BK FILL MATL, TP II

212

550-1180

LF

STM DR PIPE 18", H 1-10

8799

550-1240

LF

STM DR PIPE 24", H 1-10

754

550-2180

LF

SIDE DRAIN PIPE, 18 IN, H 1-10

338

550-1181

LF

STM DR PIPE 18", H 10-15

136

550-1241

LF

STM DR PIPE 24", H 10-15

44

550-1301

LF

STM DR PIPE 30", H 10-15

164

550-1182

LF

STM DR PIPE 18", H 15-20

208

550-1242

LF

STM DR PIPE 24", H 15-20

52

550-4230

EA

FLARED END SECT 30 IN, STORM DR

3

550-4224

EA

FLARED END SECT 24 IN, STORM DR

2

550-4218

EA

FLARED END SECT 18 IN, STORM DR

5

550-3418

EA

SAFETY END SECTION 18 IN, SIDE DRAIN

9

500-3800

CY

CLASS A CONCRETE, INCL REINF STEEL

4

600-0001

CY

FLOWABLE FILL

9

611-3000

EA

RECONSTR CATCH BASIN, GROUP 1

1

668-1100

EA

CATCH BASIN, GP 1

102

668-1110

LF

CATCH BASIN, GP 1, ADDL DEPTH

106

668-2100

EA

DROP INLET, GP 1

6

668-2110

LF

DROP INLET, GP 1, ADDL DEPTH

1

668-4300

EA

STORM SEW MANHOLE, TP 1

1

611-3030

EA

RECONSTRUCT STORM SEW MANHOLE, TP 1

2

611-3100

EA

RECONSTRUCT JUNCTION BOX

1

611-8000

EA

ADJUST CATCH BASIN TO GRADE

2

611-3010

EA

RECONSTR DROP INLET, GROUP 1

1

610-6515

EA

REM HIGHWAY SIGN, STD

4

636-1020

SF

HWY SGN, TP1 MAT, REFL SH TP3

165

636-1033

SF

HWY SIGNS, TP1 MAT, REFL SH TP 9

243

636-1041

SF

HWY SIGNS, TP2 MAT, REFL SH TP 9

63

636-2070

LF

GALV STEEL POSTS, TP 7

1017

652-5451

LF

SOLID TRAF STRIPE, 5 IN, WHITE

20530

653-0120

EA

THERM PVM T MARK, ARROW, TP 2

74

653-0170

EA

THERM PVM T MARK, ARROW, TP 7

3

653-1502

LF

THERMO SOLID TRAF ST, 5 IN YEL

14000

ITEM

UNITS

DESCRIPTION

QUANTITY

653-1704

LF

THERM SOLID TRAF STRIPE, 24", WH

310

653-1804

LF

THERM SOLID TRAF STRIPE, 8", WH

970

653-3501

GLF

THERMO SKIP TRAF ST, 5 IN, WHI

18670

653-6006

SY

THERM TRAF STRIPING, YELLOW

350

654-1003

EA

RAISED PVM T MARKERS TP 3

470

652-0210

EA

PAVEMENT MARKING, WORD, TP 1

1

163-0240

TN

MULCH

350

163-0300

EA

CONSTRUCTION EXIT

17

167-1500

MO

WATER QUALITY INSPECTION

12

163-0528

LF

CONSTR AND REM FAB CK DAM - TP C SLT FN

570

163-0550

EA

CONS & REM INLET SEDIMENT TRAP

104

163-0520

LF

CONSTRUCT AND REMOVE TEMPORARY PIPE SLOPE DRAIN

115

165-0030

LF

MAINT OF TEMP SILT FENCE, TP C

5910

165-0041

LF

MAINT OF CHECK DAMS - ALL TYPES

570

163-0541

EA

CONS & REM ROCK FILTER DAMS

35

165-0110

EA

MAINT OF ROCK FILTER DAM

35

163-0542

EA

CONS & REM STONE FILTER RING

7

165-0111

EA

MAINT OF STONE FILTER RING

7

165-0101

EA

MAINT OF CONST EXIT

17

165-0105

EA

MAINT OF INLET SEDIMENT TRAP

104

167-1000

EA

WATER QUALITY MONITORING AND SAMPLING

3

171-0030

LF

TEMPORARY SILT FENCE, TYPE C

11820

163-0503

EA

CONS & REM SILT CONT GATE - TYP 3

7

165-0087

EA

MAINT OF SILT CONT GATE - TYP 3

7

603-2181

SY

STN DUMPED RIP RAP, TP 3, 18"

263

603-7000

SY

PLASTIC FILTER FABRIC

263

700-7000

TN

AGRICULTURAL LIME

35

700-8000

TN

FERTILIZER MIXED GRADE

10

700-8100

LB

FERTILIZER NITROGEN CONTENT

600

711-0100

SY

TURF REINFORCING MATTING, TP 1

2180

711-0200

SY

TURF REINFORCING MATTING, TP 2

1840

711-0300

SY

TURF REINFORCING MATTING, TP 3

930

716-2000

SY

EROSION CONTROL MATS, SLOPES

48870

627-1000

SF

MSE WALL FACE, 0 - 10 FT HT, WALL NO - 1, 3, 4, 5, 6 & 7

11842

627-1010

SF

MSE WALL FACE, 10 - 20 FT HT, WALL NO - 1, 5 & 7

3787

621-4022

LF

CONCRETE SIDE BARRIER, TYPE 2B - WALL NO 2

102

621-4023

LF

CONCRETE SIDE BARRIER, TYPE 2C - WALL NO 2

48

632-0003

EA

CHANGEABLE MESSAGE SIGN, PORTABLE TYPE 3

2

647-5230

EA

SIGNAL ASSEMBLY, FLASHING SCHOOL, COMPLETE

1

647-1000

LS

TRAF SIGNAL INSTALLATION NO - 1

1

647-1000

LS

TRAF SIGNAL INSTALLATION NO - 2

1

682-9950

LF

DIRECTIONAL BORE - 4 IN

1005

639-2002

LF

STEEL WIRE STRAND CABLE, 3/8"

695

639-4004

EA

STRAIN POLE, TP IV

4

682-6233

LF

CONDUIT, NONMETL, TP 3, 2 IN

967

REF 105

REF 106

REF 107

REF 108

REF 109

REF 110

REF 111

REF 112

REF 113

REF 114

REF 105

REF 106

REF 107

REF 108

REF 109

REF 110

REF 111

REF 112

REF 113

REF 114

REF 105

REF 106

REF 107

REF 108

REF 109

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REF 112

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REF 112

REF 113

REF 114

GS&P

GRESHAM
SMITH AND
PARTNERS

REVISION DATES

FORSYTH COUNTY
ENGINEERING DEPARTMENT

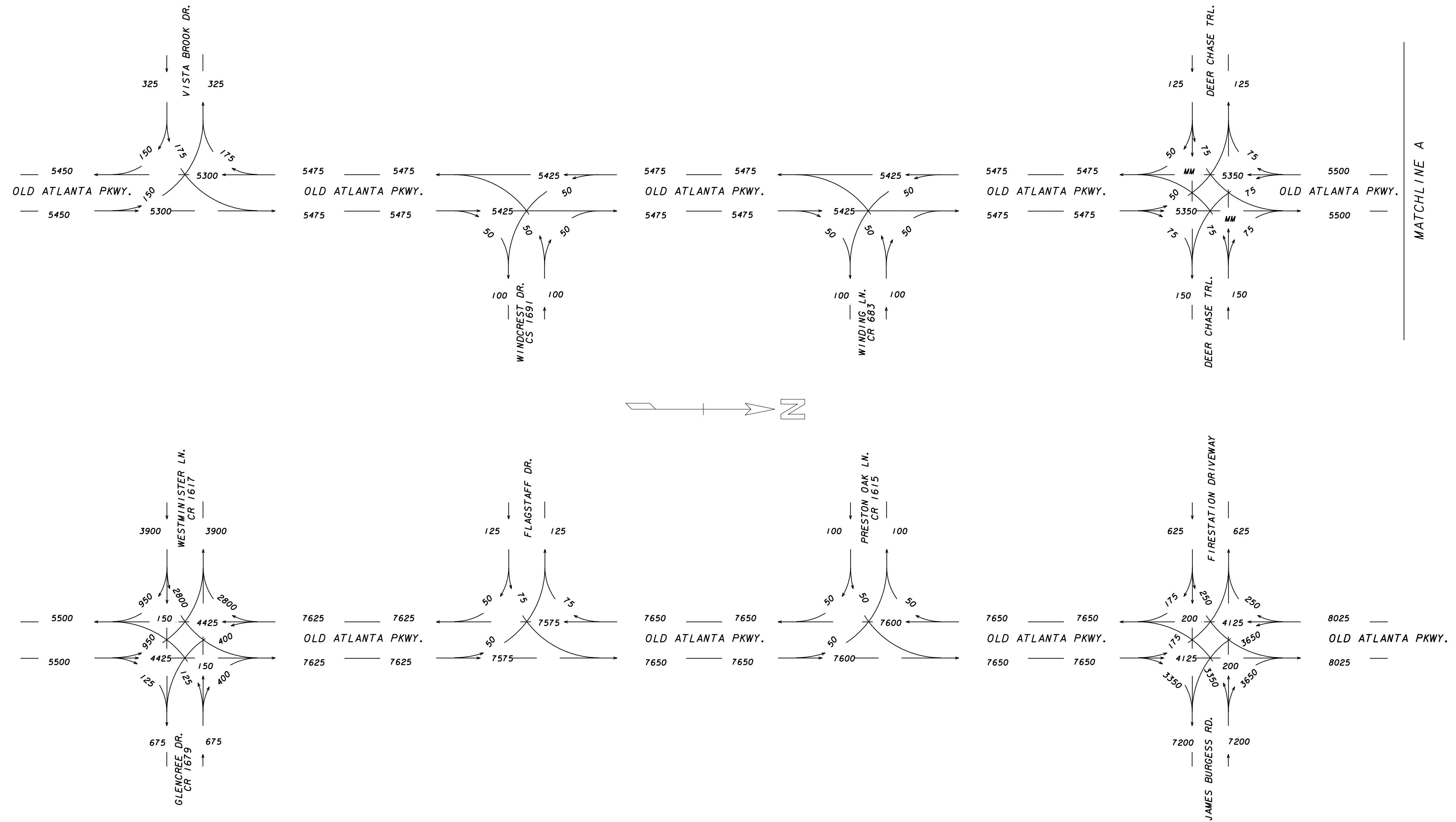
DETAILED ESTIMATE

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.

9-01

2009 AADT VOLUMES



2009 DESIGN YEAR
AADT VOLUMES
TRAFFIC VOLUMES

LEGEND
2009 AM DHV = 000
2009 PM DHV = (000)
T = 7%



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NOT TO SCALE

REVISION DATES

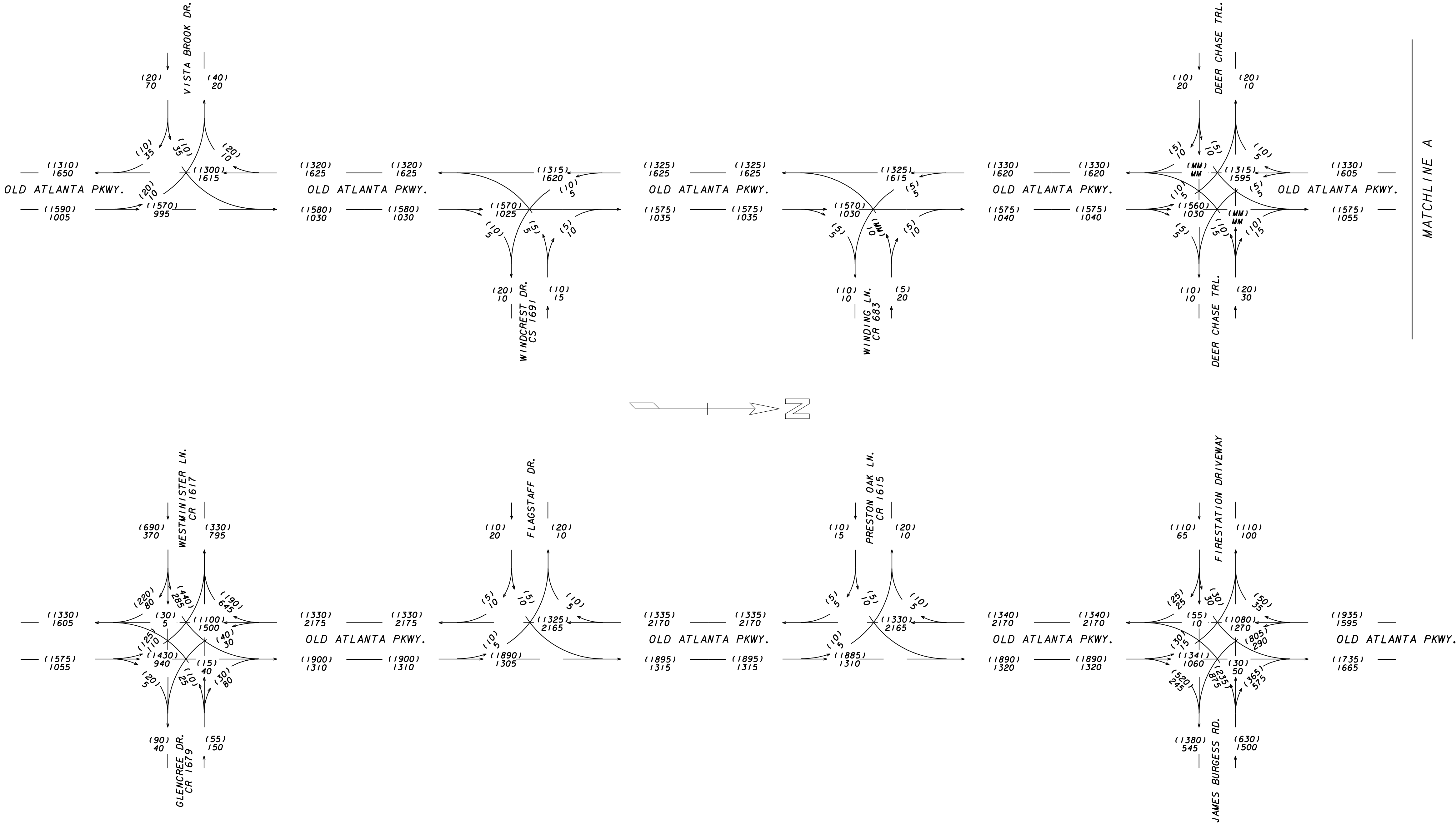
FORSYTH COUNTY
ENGINEERING DEPARTMENT

TRAFFIC DIAGRAM

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
10-02

2034 NO BUILD AM AND PM PK HR



2034 DESIGN YEAR NO BUILD
AM AND PM PK HR
TRAFFIC VOLUMES

LEGEND
2009 AM DHV = 000
2009 PM DHV = (000)
T = 7%



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PARTNERS

NOT TO SCALE

REVISION DATES

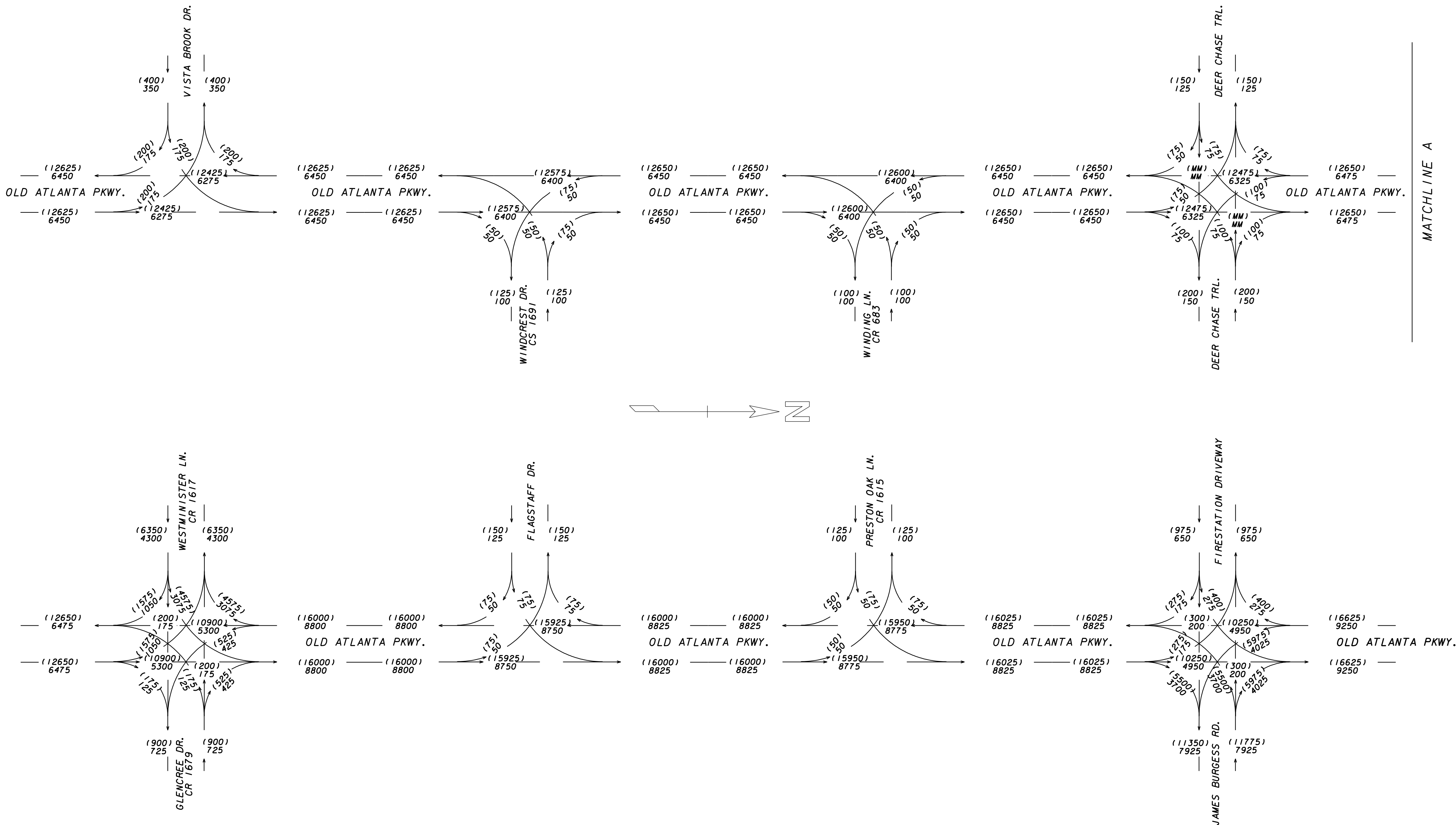
FORSYTH COUNTY
ENGINEERING DEPARTMENT

TRAFFIC DIAGRAM

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
10-03

2014 & 2034 NO BUILD AADT



2014 & 2034 DESIGN YEAR
NO BUILD AADT
TRAFFIC VOLUMES

LEGEND

2009 AM DHV = 000
2009 PM DHV = (000)

T = 7%



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PARTNERS

NOT TO SCALE

REVISION DATES

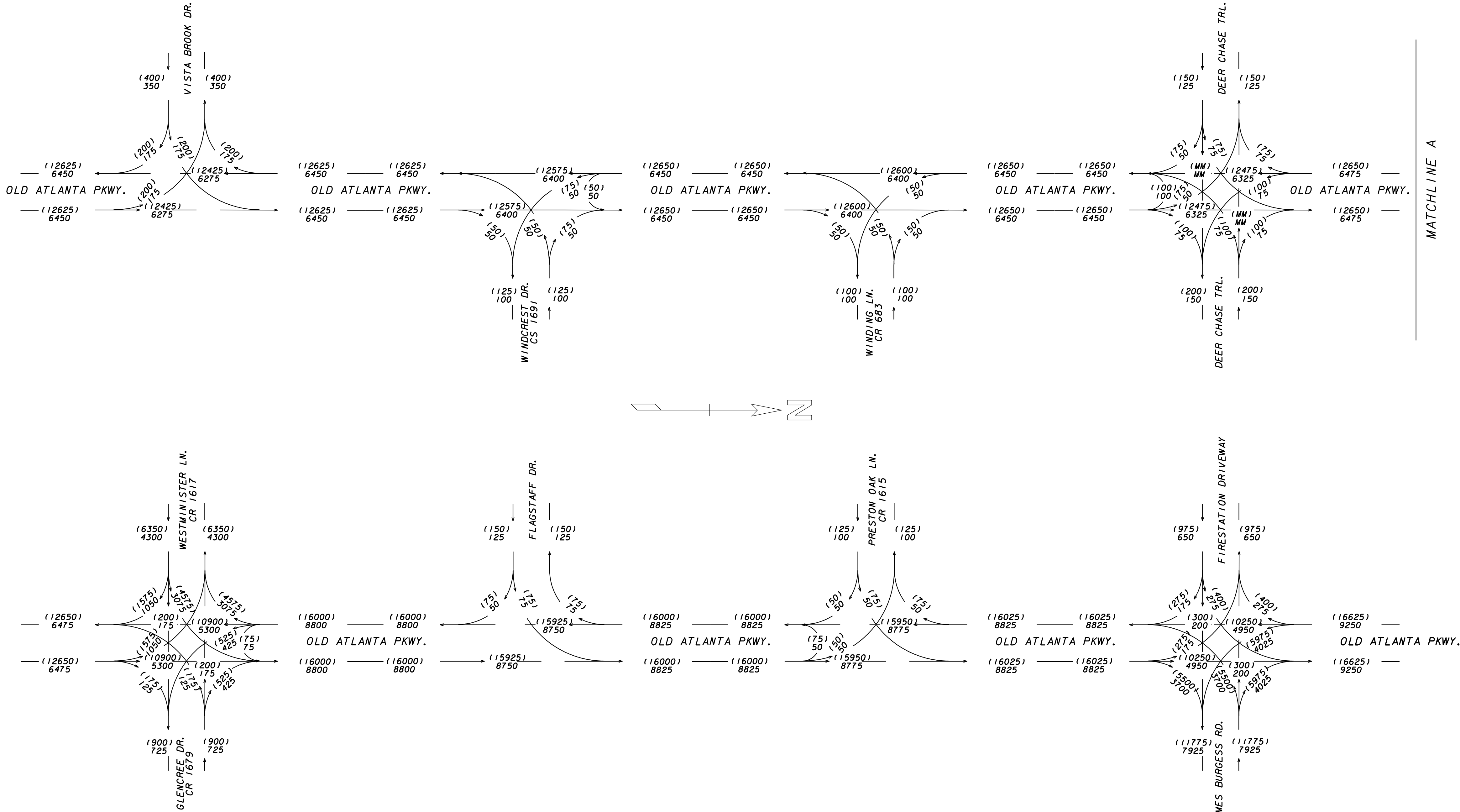
FORSYTH COUNTY
ENGINEERING DEPARTMENT

TRAFFIC DIAGRAM

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
10-04

2014 & 2034 BUILD AADT



2014 & 2034 DESIGN YEAR
BUILD AADT
TRAFFIC VOLUMES

LEGEND
2009 AM DHV = 000
2009 PM DHV = (000)
T = 7%



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SMITH AND
PARTNERS

NOT TO SCALE

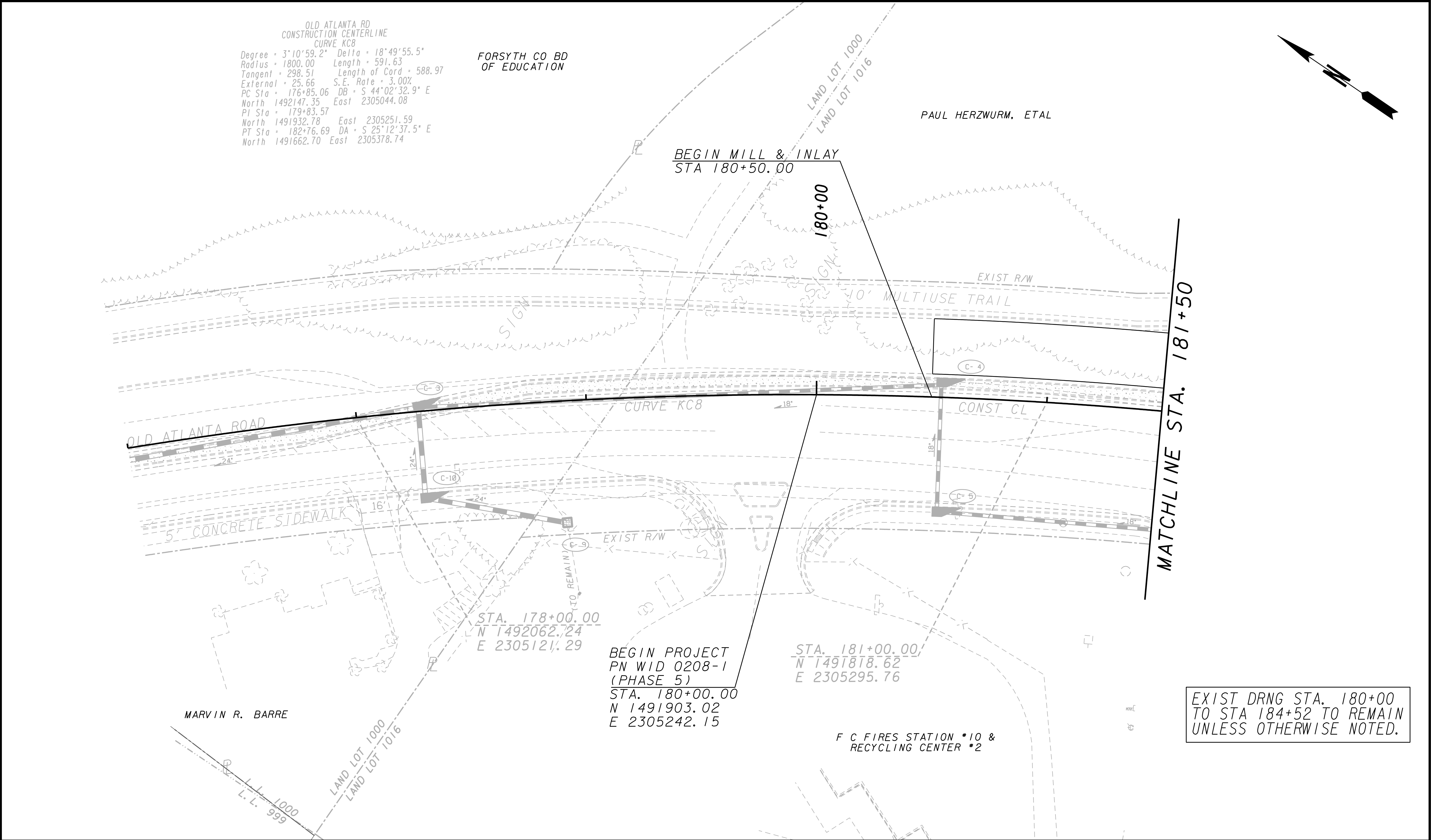
REVISION DATES

FORSYTH COUNTY
ENGINEERING DEPARTMENT

TRAFFIC DIAGRAM

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
10-06



EXISTING R/W & PROPERTY LINE

REQUIRED R/W LINE

CONSTRUCTION LIMITS

EASEMENT FOR CONSTRUCTION
& MAINT. OF SLOPES & UTILITIES

EASEMENT FOR CONSTR OF SLOPES

EASEMENT FOR CONSTR OF DRIVES

BEGIN LIMIT OF ACCESSBLA

END LIMIT OF ACCESSELA

LIMIT OF ACCESS

R/W AND LIMIT OF ACCESS

GRESHAM
SMITH AND
PARTNERS

SCALE IN FEET

0 20 40 80

REVISION DATES

FORSYTH COUNTY
ENGINEERING DEPARTMENT

MAINLINE PLAN
OLD ATLANTA ROAD

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.

13-01

CONTROL PT. 5
N 1491776.02
E 2305333.85
STA. 181+55.74
11.74' LT.
EL = 1177.99

EXIST DRNG STA. 180+00
TO STA 184+52 TO REMAIN
UNLESS OTHERWISE NOTED.

MATCHLINE STA. 12+25

JAMES BURGESS			
STA	SE	LT	RT
10+34	MAIN	+0.63%	-0.63%
10+50	FLAT	0.00%	-0.63%
10+98	NC	-2.00%	-2.00%

CURVE KC8			
STA	SE	LT	RT
175+03	ENC	-2.00%	-2.00%
175+92	FLAT	0.00%	-2.00%
176+81	RC	+2.00%	-2.00%
177+26	BFSE	+3.00%	-3.00%
182+36	EFSE	+3.00%	-3.00%
182+80	RC	+2.00%	-2.00%
183+70	FLAT	0.00%	-2.00%
184+59	BNC	-2.00%	-2.00%

OLD ATLANTA RD
CONSTRUCTION CENTERLINE
CURVE KC8
Degree = 3°10'59.16" Delta = 18°49'55.45"
Radius = 1800.00 Length = 591.63
Tangent = 298.51 Length of Cord = 588.97
External = 24.58 S.E. Rate = 3.00%
PC Sta = 176+85.06 DB = S 44°02'32.95" E
North 1492147.35 East 2305044.08
PI Sta = 179+83.57
North 1491932.78 East 2305251.59
PT Sta = 182+76.69 DA = S 25°12'37.50" E
North 1491662.70 East 2305378.74

OLD ATLANTA ROAD
STA. 183+62.19
FIRE STATION ACCESS ROAD
20+00.00

OLD ATLANTA ROAD
STA. 183+56.23 =
JAMES BURGESS ROAD
STA. 10+00.00

PAUL HERZWURM, ETAL

MATCHLINE STA. 181+50

MATCHLINE STA. 187+50

EXISTING R/W & PROPERTY LINE
REQUIRED R/W LINE
CONSTRUCTION LIMITS
EASEMENT FOR CONSTRUCTION
& MAINT. OF SLOPES & UTILITIES
EASEMENT FOR CONSTR OF SLOPES
EASEMENT FOR CONSTR OF DRIVES

BEGIN LIMIT OF ACCESS
END LIMIT OF ACCESS
LIMIT OF ACCESS
R/W AND LIMIT OF ACCESS

.....BLA

.....ELA

G R E S H A M
S M I T H A N D
P A R T N E R S

SCALE IN FEET

0

20

40

80

REVISION DATES

4-17-20		

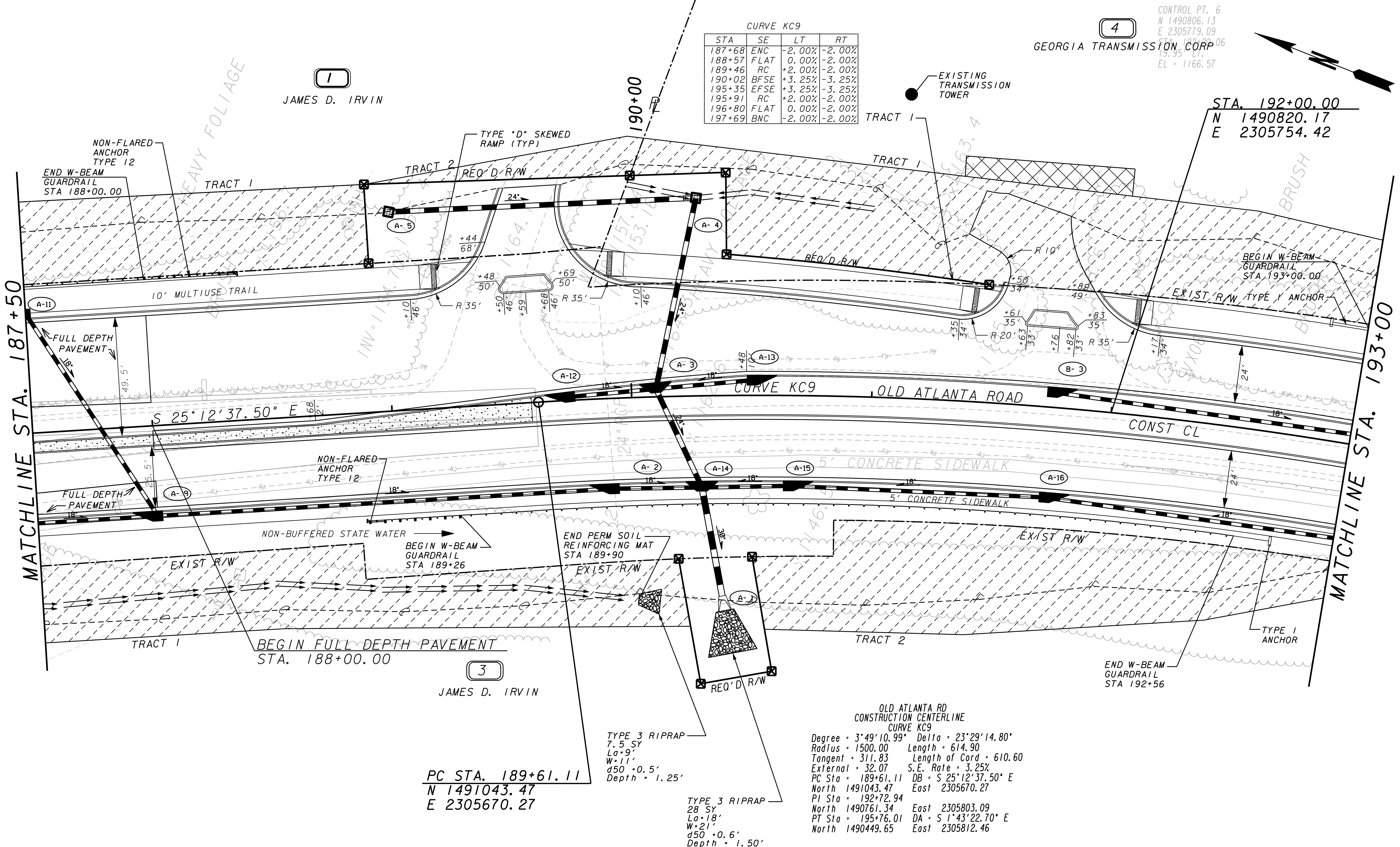
FORSYTH COUNTY
ENGINEERING DEPARTMENT

MAINLINE PLAN

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
13-02

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STA	SE	LT	RT
187+68	ENC	-2.00%	-2.00%
188+57	FLAT	0.00%	-2.00%
189+46	RC	+2.00%	-2.00%
190+02	BFSE	+3.25%	-3.25%
195+35	EFSE	+3.25%	-3.25%
195+91	RC	+2.00%	-2.00%
196+80	FLAT	0.00%	-2.00%
197+69	BNC	-2.00%	-2.00%

CONTROL PT. 6
N 1490806.13
E 2305779.09
19.35
EL = 1166.57

GEORGIA TRANSMISSION CORP

STA. 192+00.00
N 1490820.17
E 2305754.42

OLD ATLANTA RD
CONSTRUCTION CENTERLINE
CURVE KC9
Degree = 3°49'10.99" Delta = 23°29'14.80"
Radius = 1500.00 Length = 614.90
Tangent = 311.83 Length of Cord = 610.60
External = 32.07 S.E. Rate = 3.25%
PC Sta = 189+61.11 DB = S 25°12'37.50" E
North 1491043.47 East 2305670.27
PI Sta = 192+72.94
North 1490761.34 East 2305803.09
PT Sta = 195+76.01 DA = S 1°43'22.70" E
North 1490449.65 East 2305812.46

PC STA. 189+61.11
N 1491043.47
E 2305670.27

TYPE 3 RIPRAP
7.5 SY
La = 9'
W = 11'
d50 = 0.5'
Depth = 1.25'

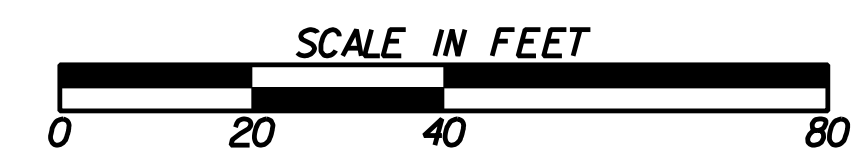
TYPE 3 RIPRAP
28 SY
La = 18'
W = 21'
d50 = 0.6'
Depth = 1.50'

- EXISTING R/W & PROPERTY LINE
- REQUIRED R/W LINE
- CONSTRUCTION LIMITS
- EASEMENT FOR CONSTRUCTION & MAINT. OF SLOPES & UTILITIES
- EASEMENT FOR CONSTR OF SLOPES
- EASEMENT FOR CONSTR OF DRIVES

- BEGIN LIMIT OF ACCESS
- END LIMIT OF ACCESS
- LIMIT OF ACCESS
- R/W AND LIMIT OF ACCESS



GRESHAM
SMITH AND
PARTNERS



REVISION DATES

FORSYTH COUNTY
ENGINEERING DEPARTMENT

MAINLINE PLAN

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
13-03

11
JAMES L. & FRANCES I. WRIGHT

CURVE KC10			
STA	SE	LT	RT
204+15	ENC	-2.00%	-2.00%
205+04	FLAT	-2.00%	0.00%
205+94	NC	-2.00%	+2.00%
206+76	BFSE	-3.85%	+3.85%
211+16	EFSE	-3.85%	+3.85%
211+99	NC	-2.00%	+2.00%
213+67	FLAT	0.00%	0.00%
215+34	RC	2.00%	-2.00%

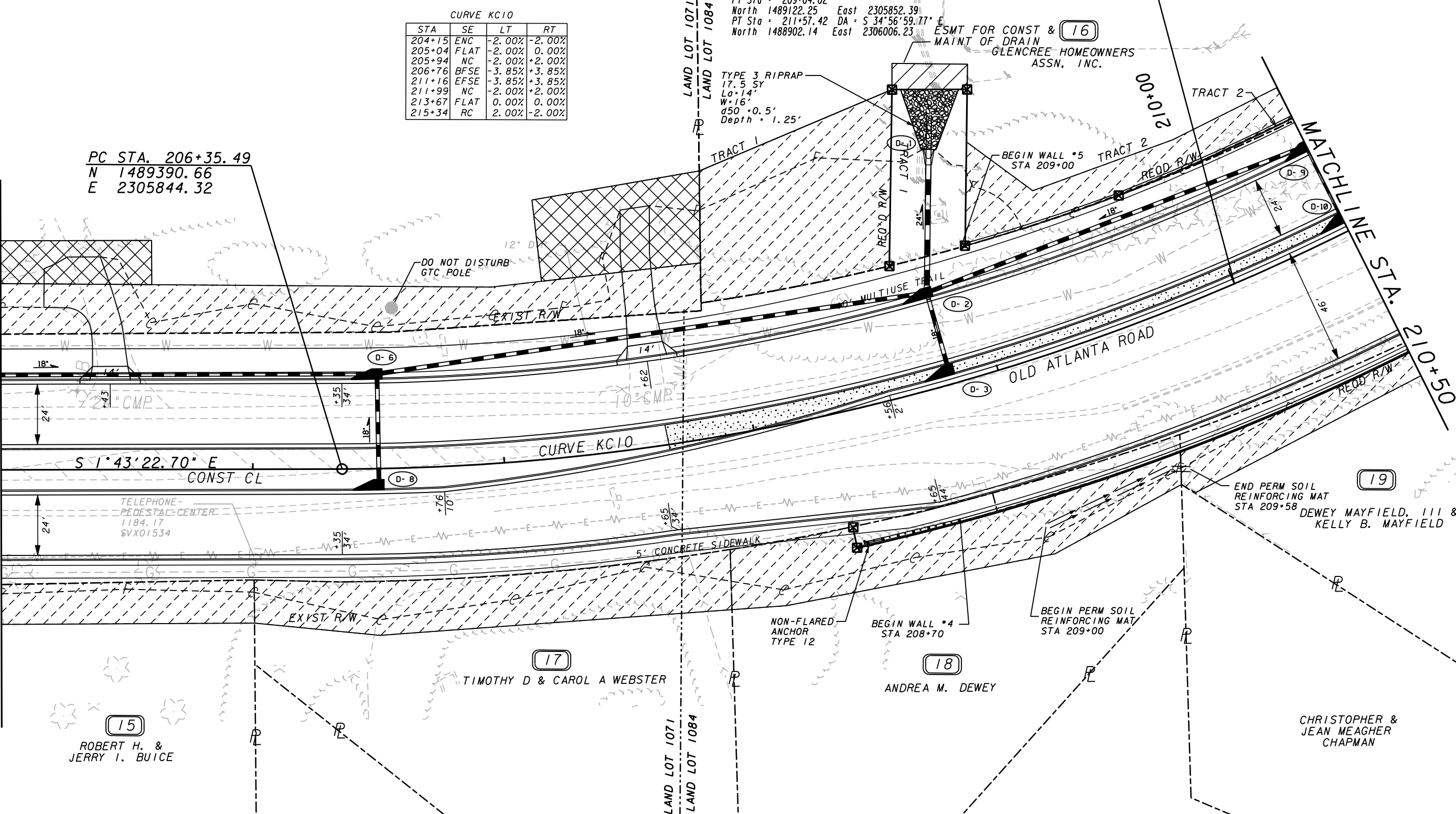
OLD ATLANTA RD
CONSTRUCTION CENTERLINE
CURVE KC10
Degree = 6°21'58.31" Delta = -33°13'37.07"
Radius = 900.00 Length = 521.93
Tangent = 268.53 Length of Cord = 514.64
External = 39.21 S.E. Rate = 3.85%
PC Sta = 206+35.49 DB = S 1°43'22.70" E
North 1489390.66 East 2305844.32
PI Sta = 209+04.02
North 1489122.25 East 2305852.39
PT Sta = 211+57.42 DA = S 34°56'59.77" E
North 1488902.14 East 2306006.23

STA. 210+00.00
N 1489038.38
E 2305927.76



MATCHLINE STA. 205+00

PC STA. 206+35.49
N 1489390.66
E 2305844.32

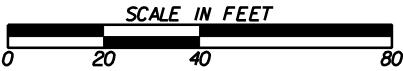


- EXISTING R/W & PROPERTY LINE
- REQUIRED R/W LINE
- CONSTRUCTION LIMITS
- EASEMENT FOR CONSTRUCTION & MAINT. OF SLOPES & UTILITIES
- EASEMENT FOR CONSTR OF SLOPES
- EASEMENT FOR CONSTR OF DRIVES

BEGIN LIMIT OF ACCESS
END LIMIT OF ACCESS
LIMIT OF ACCESS
R/W AND LIMIT OF ACCESS



GRESHAM
SMITH AND
PARTNERS



REVISION DATES

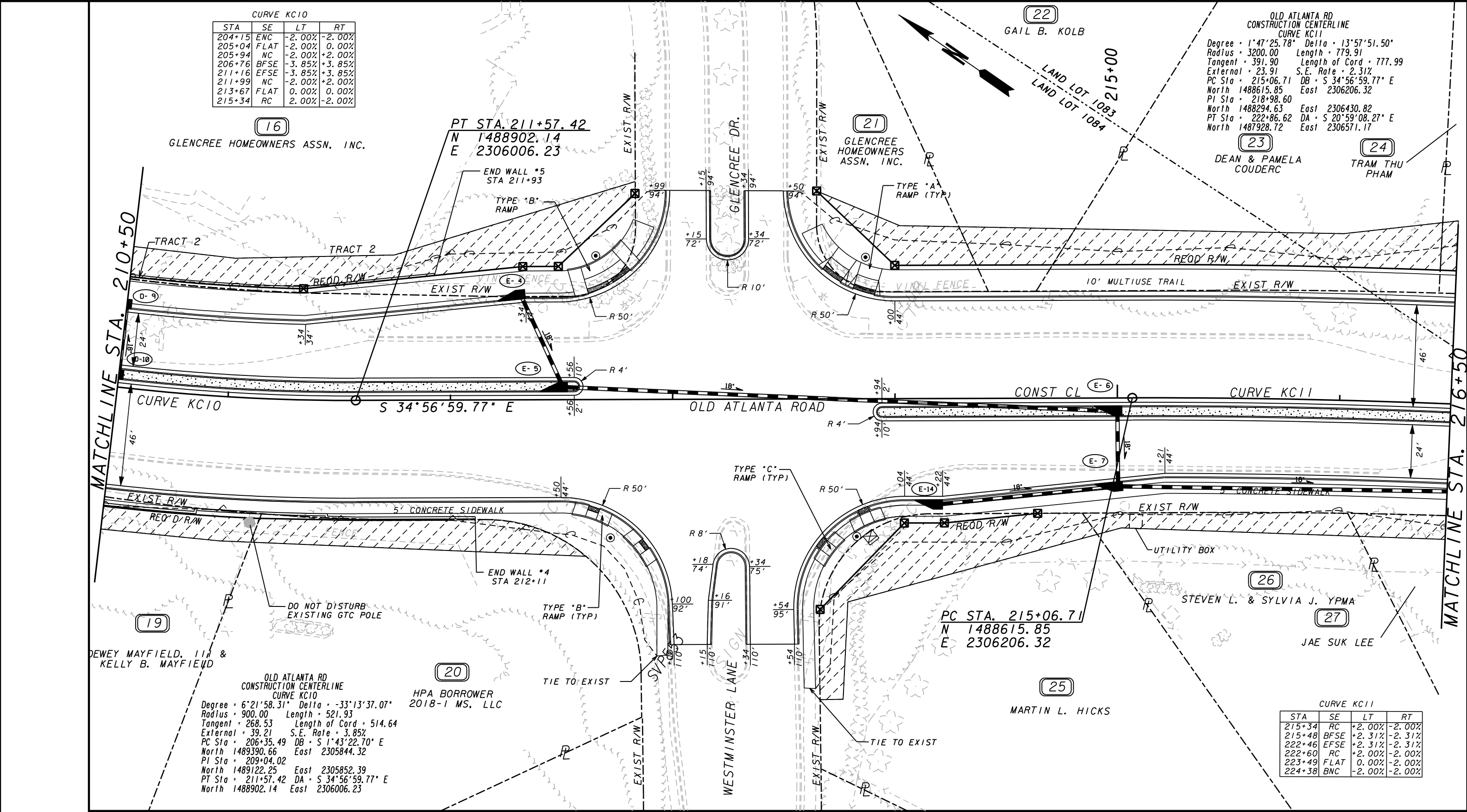
4-17-20

FORSYTH COUNTY
ENGINEERING DEPARTMENT

MAINLINE PLAN

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
13-06



EXISTING R/W & PROPERTY LINE
REQUIRED R/W LINE
CONSTRUCTION LIMITS
EASEMENT FOR CONSTRUCTION
& MAINT. OF SLOPES & UTILITIES
EASEMENT FOR CONSTR OF SLOPES
EASEMENT FOR CONSTR OF DRIVES

BEGIN LIMIT OF ACCESSBLA
END LIMIT OF ACCESSELA
LIMIT OF ACCESS
R/W AND LIMIT OF ACCESS

GRESHAM
SMITH AND
PARTNERS

REVISION DATES

4-17-20		

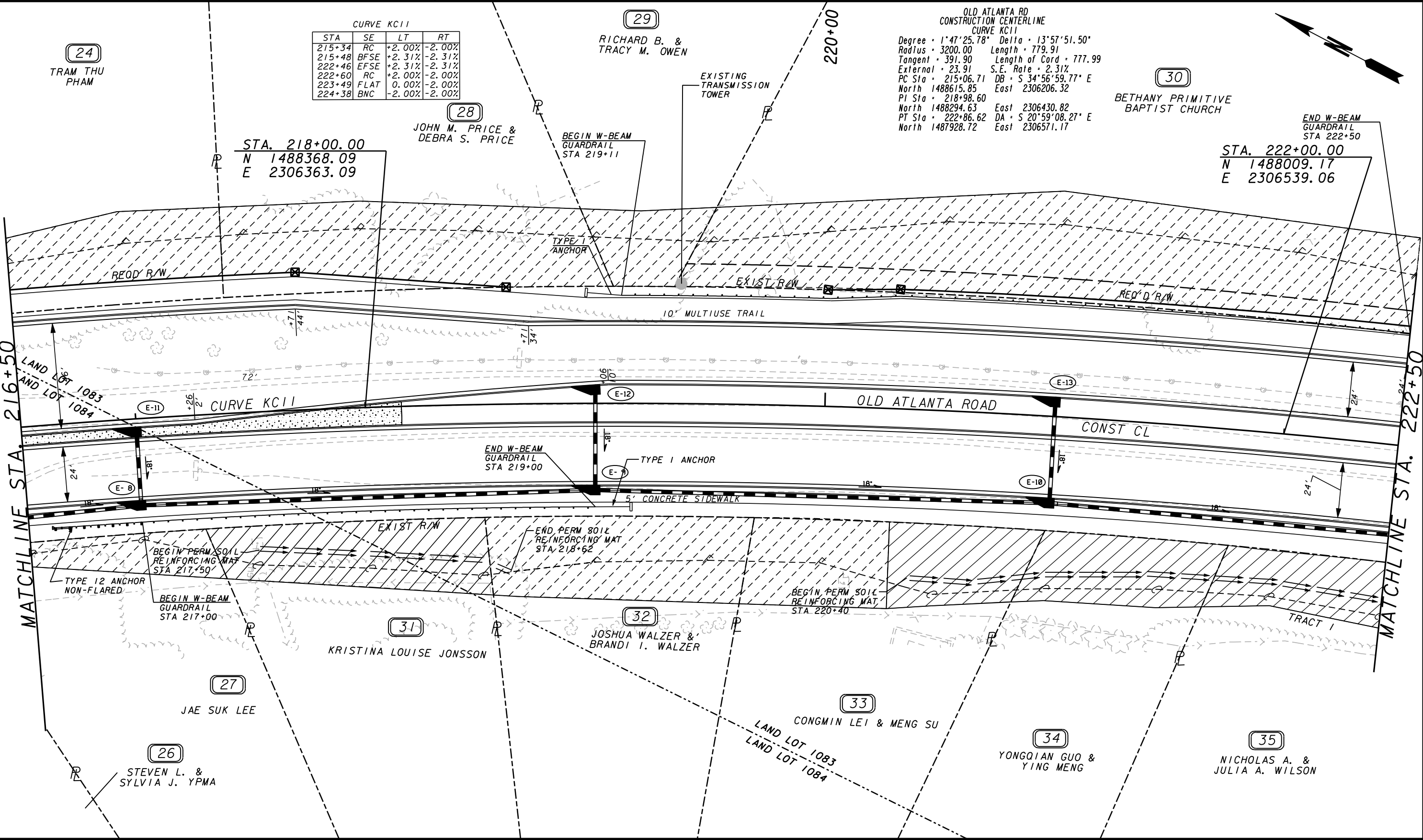
FORSYTH COUNTY
ENGINEERING DEPARTMENT

MAINLINE PLAN

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
13-07

...\\DGNs\Phase 5\2734101CP07.dgn 4/13/2020 10:13:18 AM



CURVE KC11

STA	SE	LT	RT
215+34	RC	+2.00%	-2.00%
215+48	BFSE	+2.31%	-2.31%
222+46	EFSE	+2.31%	-2.31%
222+60	RC	+2.00%	-2.00%
223+49	FLAT	0.00%	-2.00%
224+38	BNC	-2.00%	-2.00%

OLD ATLANTA RD
CONSTRUCTION CENTERLINE
CURVE KC11
Degree = 1°47'25.78" Delta = 13°57'51.50"
Radius = 3200.00 Length = 779.91
Tangent = 391.90 Length of Cord = 777.99
External = 23.91 S.E. Angle = 2.31%
PC Sta = 215+06.71 DB = S 34°56'59.77" E
North 1488615.85 East 2306206.32
PI Sta = 218+98.60
North 1488294.63 East 2306430.82
PT Sta = 222+86.62 DA = S 20°59'08.27" E
North 1487928.72 East 2306571.17

(24)
TRAM THU PHAM

(29)
RICHARD B. & TRACY M. OWEN

(28)
JOHN M. PRICE & DEBRA S. PRICE

(30)
BETHANY PRIMITIVE BAPTIST CHURCH

STA. 222+00.00
N 1488009.17
E 2306539.06

STA. 218+00.00
N 1488368.09
E 2306363.09

(27)
JAE SUK LEE

(26)
STEVEN L. & SYLVIA J. YPMA

(31)
KRISTINA LOUISE JONSSON

(32)
JOSHUA WALZER & BRANDI I. WALZER

(33)
CONGMIN LEI & MENG SU

(34)
YONGQIAN GUO & YING MENG

(35)
NICHOLAS A. & JULIA A. WILSON

- EXISTING R/W & PROPERTY LINE
REQUIRED R/W LINE
CONSTRUCTION LIMITS
EASEMENT FOR CONSTRUCTION & MAINT. OF SLOPES & UTILITIES
EASEMENT FOR CONSTR OF SLOPES
EASEMENT FOR CONSTR OF DRIVES

- BEGIN LIMIT OF ACCESS
END LIMIT OF ACCESS
LIMIT OF ACCESS
R/W AND LIMIT OF ACCESS



GRESHAM SMITH AND PARTNERS



REVISION DATES

4-17-20		

FORSYTH COUNTY
ENGINEERING DEPARTMENT

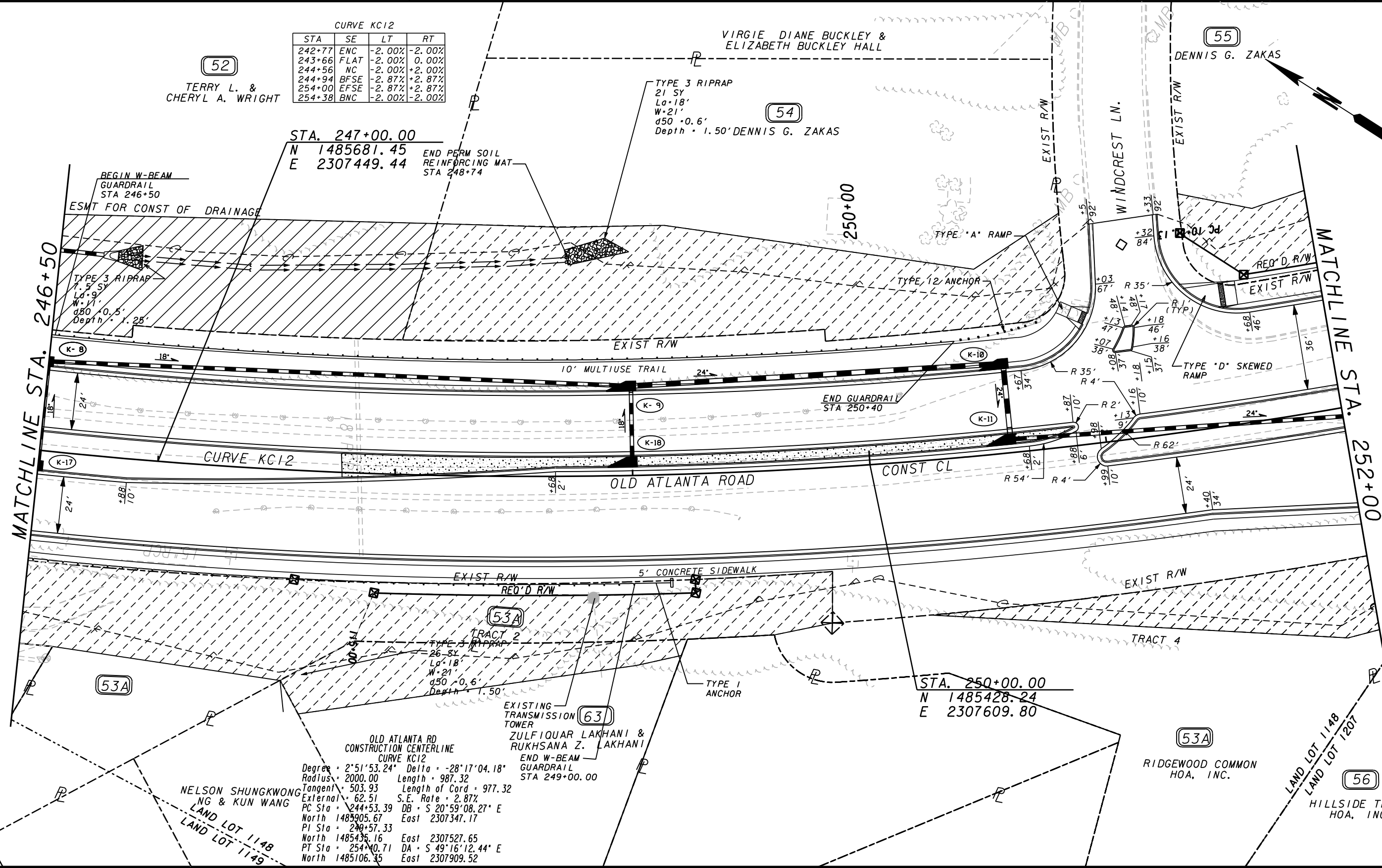
MAINLINE PLAN

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
13-08



DRAWING No.
13-09



EXISTING R/W & PROPERTY LINE
REQUIRED R/W LINE
CONSTRUCTION LIMITS
EASEMENT FOR CONSTRUCTION
& MAINT. OF SLOPES & UTILITIES
EASEMENT FOR CONSTR OF SLOPES
EASEMENT FOR CONSTR OF DRIVES

-----BLA
-----ELA

BEGIN LIMIT OF ACCESS
END LIMIT OF ACCESS
LIMIT OF ACCESS
R/W AND LIMIT OF ACCESS

GRESHAM
SMITH AND
PARTNERS

REVISION DATES

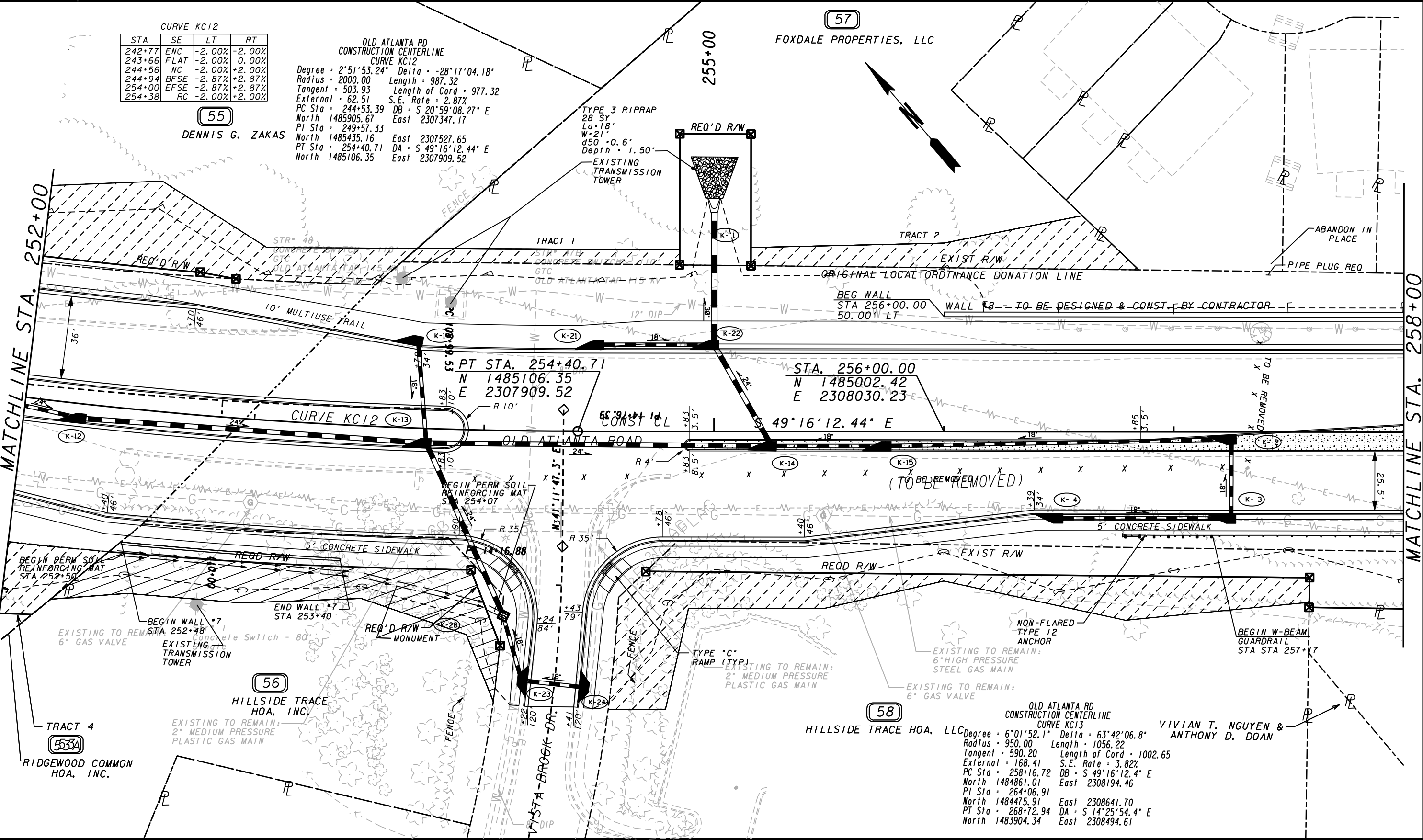
4-17-20			

FORSYTH COUNTY
ENGINEERING DEPARTMENT

MAINLINE PLAN

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
13-13



CURVE KC12

STA	SE	LT	RT
242+77	ENC	-2.00%	-2.00%
243+66	FLAT	-2.00%	0.00%
244+56	NC	-2.00%	+2.00%
244+94	BFSE	-2.87%	+2.87%
254+00	EFSE	-2.87%	+2.87%
254+38	RC	-2.00%	+2.00%

OLD ATLANTA RD
CONSTRUCTION CENTERLINE
CURVE KC12
Degree = 2°51'53.24" Delta = -28°17'04.18"
Radius = 2000.00 Length = 987.32
Tangent = 503.93 Length of Cord = 977.32
External = 62.51 S.E. Rate = 2.87%
PC Sta = 244+53.39 DB = S 20°59'08.27" E
North 1485905.67 East 2307347.17
PI Sta = 249+57.33
North 1485435.16 East 2307527.65
PT Sta = 254+40.71 DA = S 49°16'12.44" E
North 1485106.35 East 2307909.52

OLD ATLANTA RD
CONSTRUCTION CENTERLINE
CURVE KC13
Degree = 6°01'52.1" Delta = 63°42'06.8"
Radius = 950.00 Length = 1056.22
Tangent = 590.20 Length of Cord = 1002.65
External = 168.41 S.E. Rate = 3.82%
PC Sta = 258+16.72 DB = S 49°16'12.4" E
North 1484861.01 East 2308194.46
PI Sta = 264+06.91
North 1484475.91 East 2308641.70
PT Sta = 268+72.94 DA = S 14°25'54.4" E
North 1483904.34 East 2308494.61

- EXISTING R/W & PROPERTY LINE
- REQUIRED R/W LINE
- CONSTRUCTION LIMITS
- EASEMENT FOR CONSTRUCTION & MAINT. OF SLOPES & UTILITIES
- EASEMENT FOR CONSTR OF SLOPES
- EASEMENT FOR CONSTR OF DRIVES

- BEGIN LIMIT OF ACCESS
- END LIMIT OF ACCESS
- LIMIT OF ACCESS
- R/W AND LIMIT OF ACCESS



GRESHAM
SMITH AND
PARTNERS



REVISION DATES

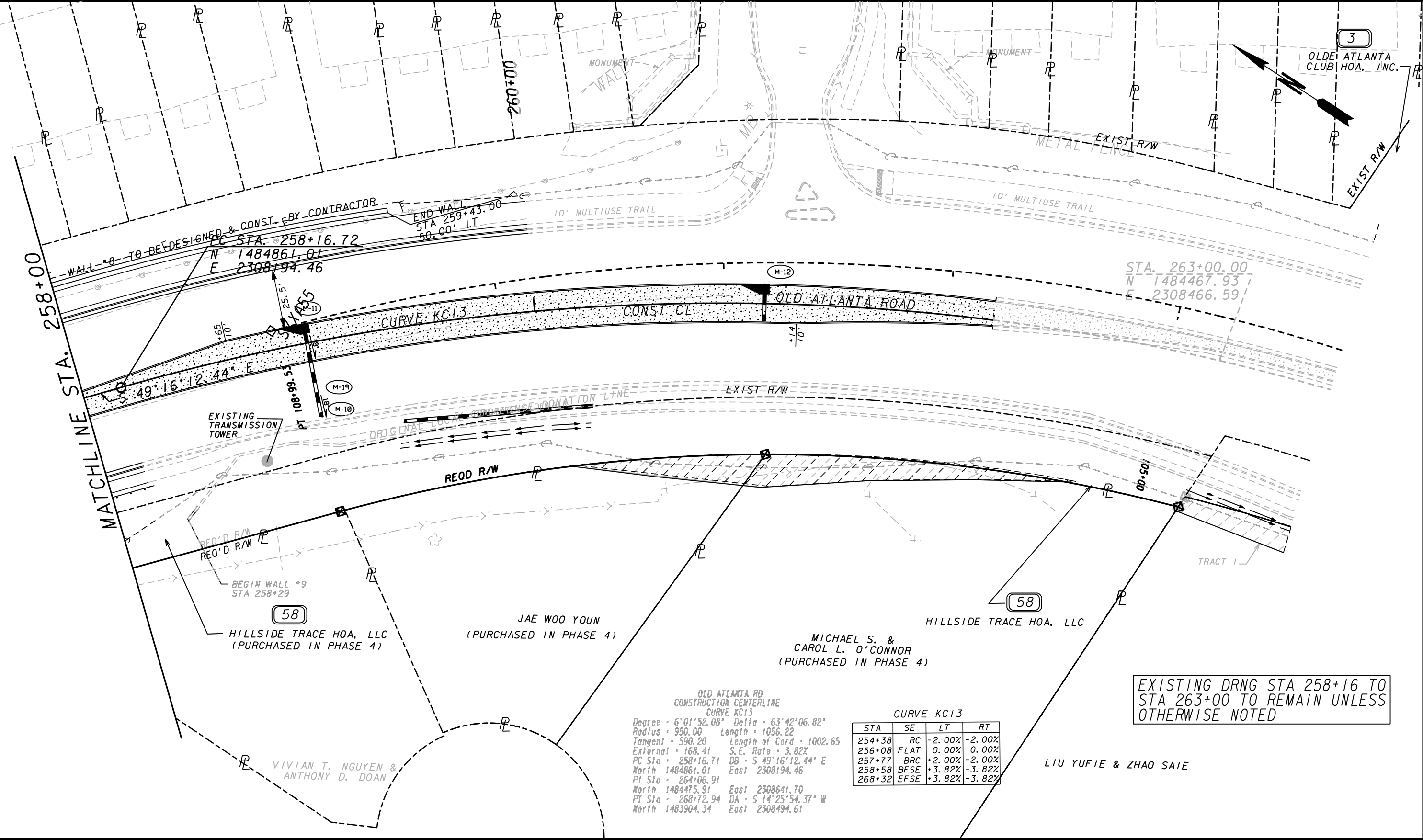
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FORSYTH COUNTY
ENGINEERING DEPARTMENT

MAINLINE PLAN

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
13-14



OLD ATLANTA RD
CONSTRUCTION CENTERLINE
CURVE KC13

Degree	6°01'52.08"	Delta	63°42'06.82"
Radius	950.00	Length	1056.22
Tangent	590.20	Length of Cord	1002.65
External	168.41	S.E. Rate	3.82%
PC Sta	258+16.71	DB	S 49°16'12.44" E
North	1484861.01	East	2308194.46
PI Sta	264+06.91		
North	1484475.91	East	2308641.70
PT Sta	268+72.94	DA	S 14°25'54.37" W
North	1483904.34	East	2308494.61

CURVE KC13

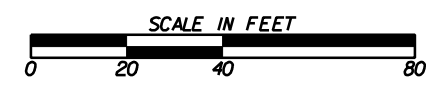
STA	SE	LT	RT
254+38	RC	-2.00%	-2.00%
256+08	FLAT	0.00%	0.00%
257+77	BRC	+2.00%	-2.00%
258+58	BFSE	+3.82%	-3.82%
268+32	EFSE	+3.82%	-3.82%

- EXISTING R/W & PROPERTY LINE
- REQUIRED R/W LINE
- CONSTRUCTION LIMITS
- EASEMENT FOR CONSTRUCTION & MAINT. OF SLOPES & UTILITIES
- EASEMENT FOR CONSTR OF SLOPES
- EASEMENT FOR CONSTR OF DRIVES

- BEGIN LIMIT OF ACCESS
- END LIMIT OF ACCESS
- LIMIT OF ACCESS
- R/W AND LIMIT OF ACCESS



GRESHAM
SMITH AND
PARTNERS



REVISION DATES

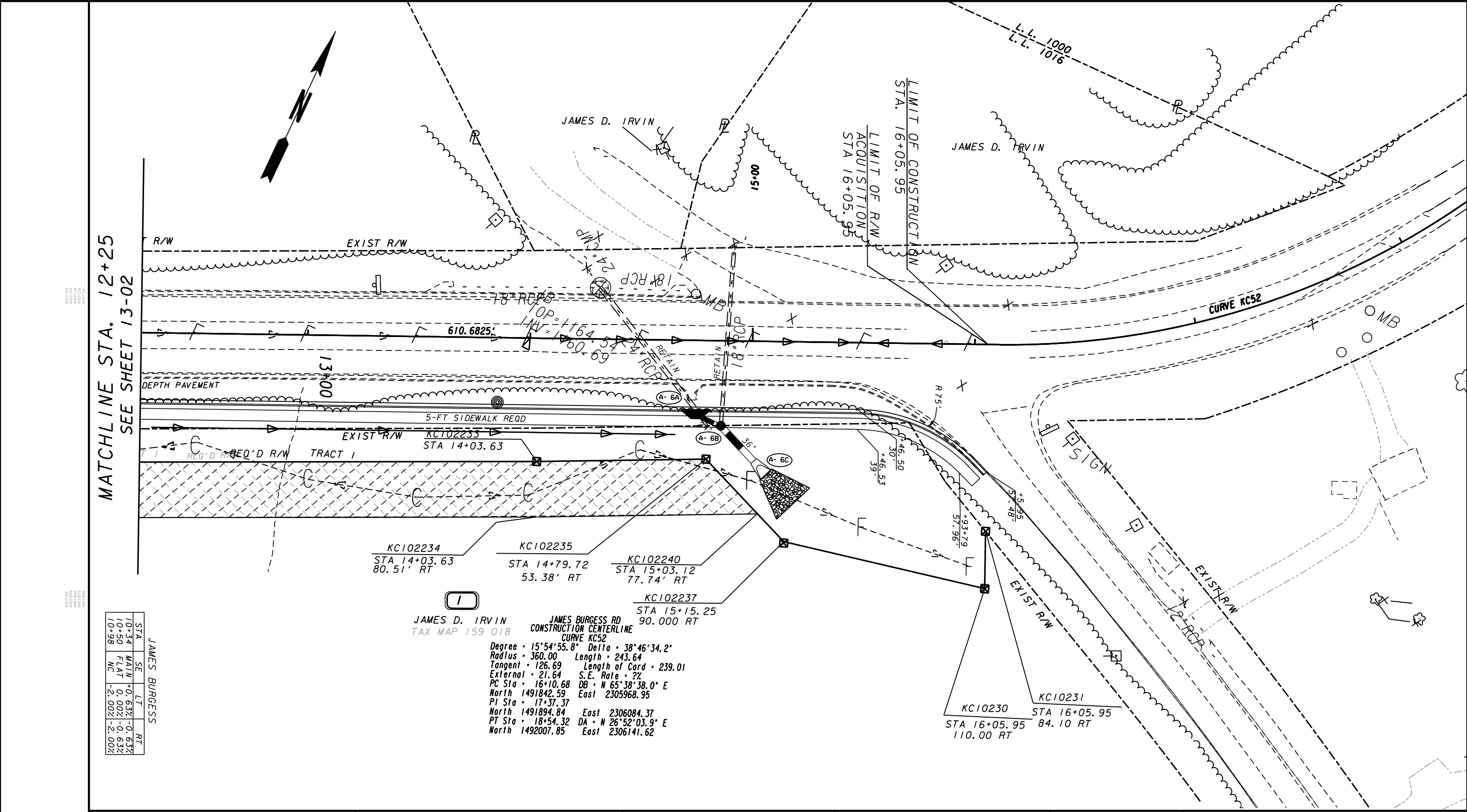
4-17-20		

FORSYTH COUNTY
ENGINEERING DEPARTMENT

MAINLINE PLAN

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
13-15



STA	SE	LT	RT
10+34	MAIN	0.63%	-0.63%
10+50	FLAT	0.00%	-0.63%
10+98	NC	-2.00%	-2.00%

JAMES BURGESS

KC102234
STA 14+03.63
80.51' RT

KC102235
STA 14+79.72
53.38' RT

KC102240
STA 15+03.12
77.74' RT

KC102237
STA 15+15.25
90.00 RT

KC10230
STA 16+05.95
110.00 RT

KC10231
STA 16+05.95
84.10 RT

JAMES D. IRVIN
TAX MAP 159 018

JAMES BURGESS RD
CONSTRUCTION CENTERLINE
CURVE KC52

Degree - 15°54'55.8" Delta - 38°46'34.2"
Radius - 360.00 Length - 243.64
Tangent - 126.69 Length of Cord - 239.01
External - 21.64 S.E. Rate - 2%
PC Sta - 16+10.68 DB - N 65°38'38.0" E
North 1491842.59 East 2305968.95
PI Sta - 17+37.37
North 1491894.84 East 2306084.37
PT Sta - 18+54.32 DA - N 26°52'03.9" E
North 1492007.85 East 2306141.62

- EXISTING R/W & PROPERTY LINE
- REQUIRED R/W LINE
- CONSTRUCTION LIMITS
- EASEMENT FOR CONSTRUCTION & MAINT. OF SLOPES & UTILITIES
- EASEMENT FOR CONSTR OF SLOPES
- EASEMENT FOR CONSTR OF DRIVES

- BEGIN LIMIT OF ACCESS
- END LIMIT OF ACCESS
- LIMIT OF ACCESS
- R/W AND LIMIT OF ACCESS



G R E S H A M
S M I T H A N D
P A R T N E R S



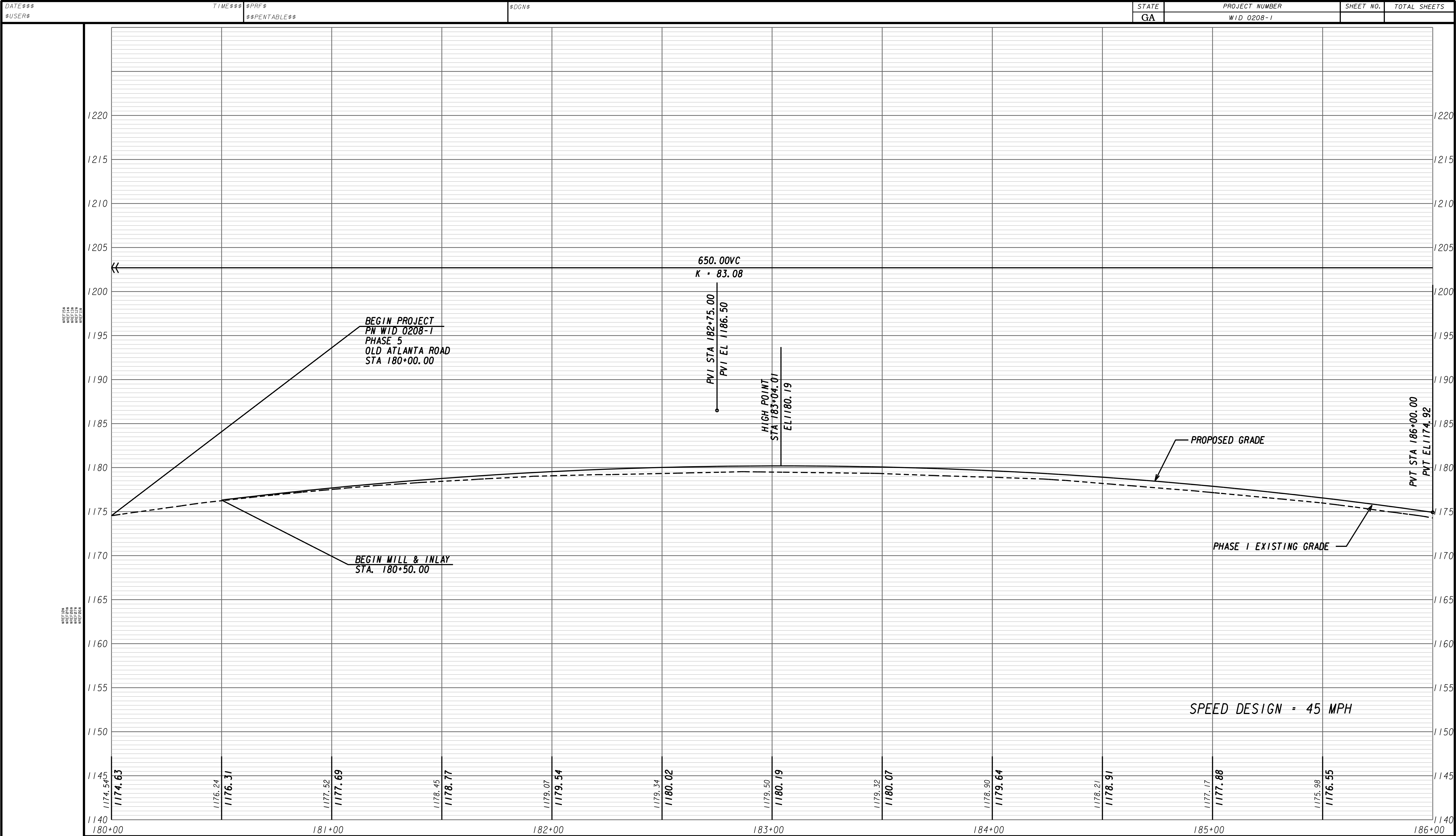
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FORSYTH COUNTY
ENGINEERING DEPARTMENT

CROSSROAD PLAN
JAMES BURGESS ROAD

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
14-01



3/11/2007
G20EDG
\$PRF\$
\$PENTABLE\$

G R E S H A M
S M I T H A N D
P A R T N E R S

SCALE IN FEET 1"=5' VERTICAL
0 5 10 20

SCALE IN FEET 1"=20' HORIZONTAL
0 20 40 80

REVISION DATES

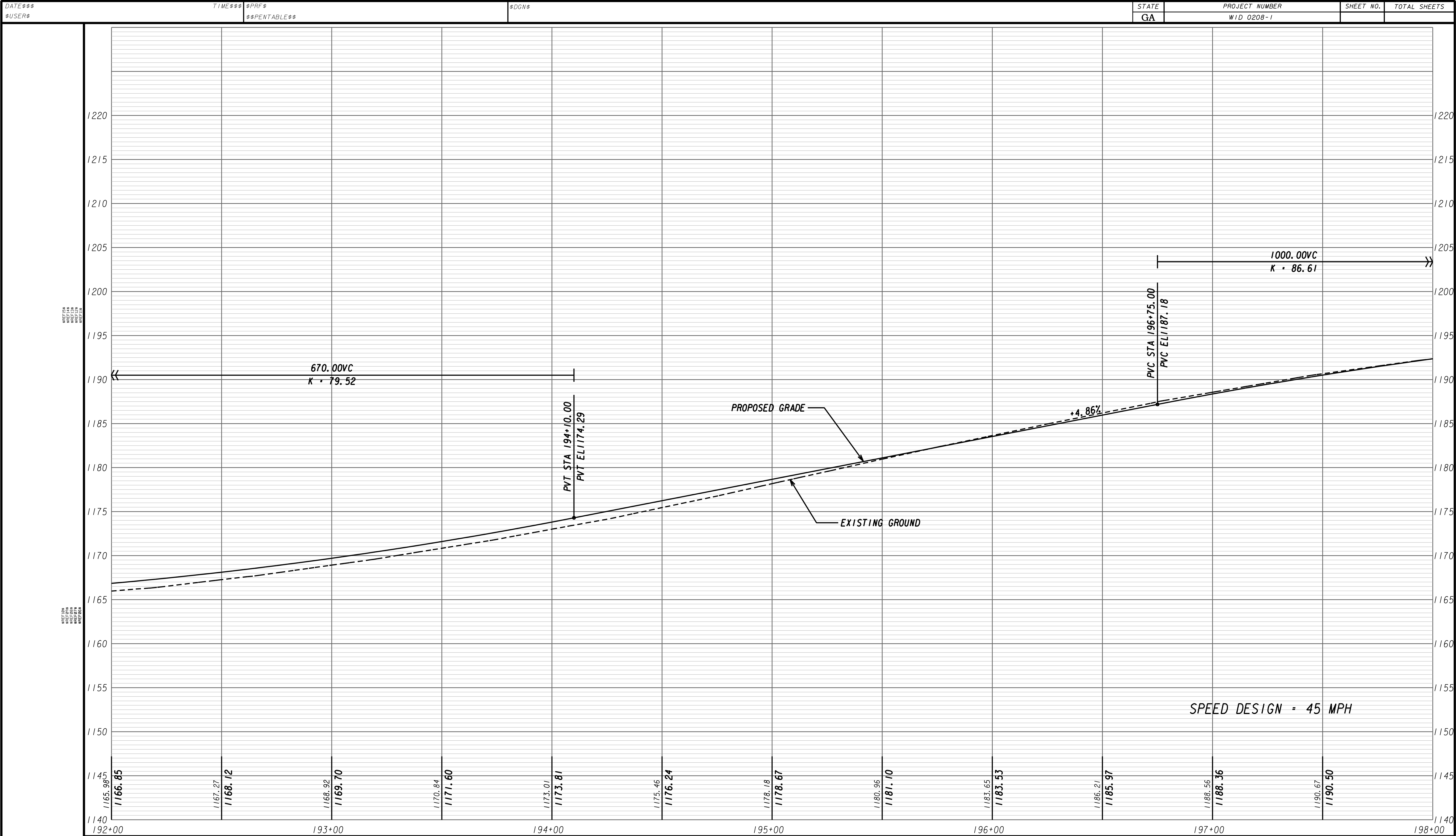
FORSYTH COUNTY
ENGINEERING DEPARTMENT

MAINLINE PROFILE

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
15-01

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SCALE IN FEET 1"=20' HORIZONTAL 	MAINLINE PROFILE WID 0208-1 (PHASE 5) FORSYTH COUNTY	DRAWING No. 15-02																					



3/11/2007
G20EDG
WID 0208-1
WID 0208-1
WID 0208-1
WID 0208-1

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PARTNERS

SCALE IN FEET 1"=5' VERTICAL
0 5 10 20

SCALE IN FEET 1"=20' HORIZONTAL
0 20 40 80

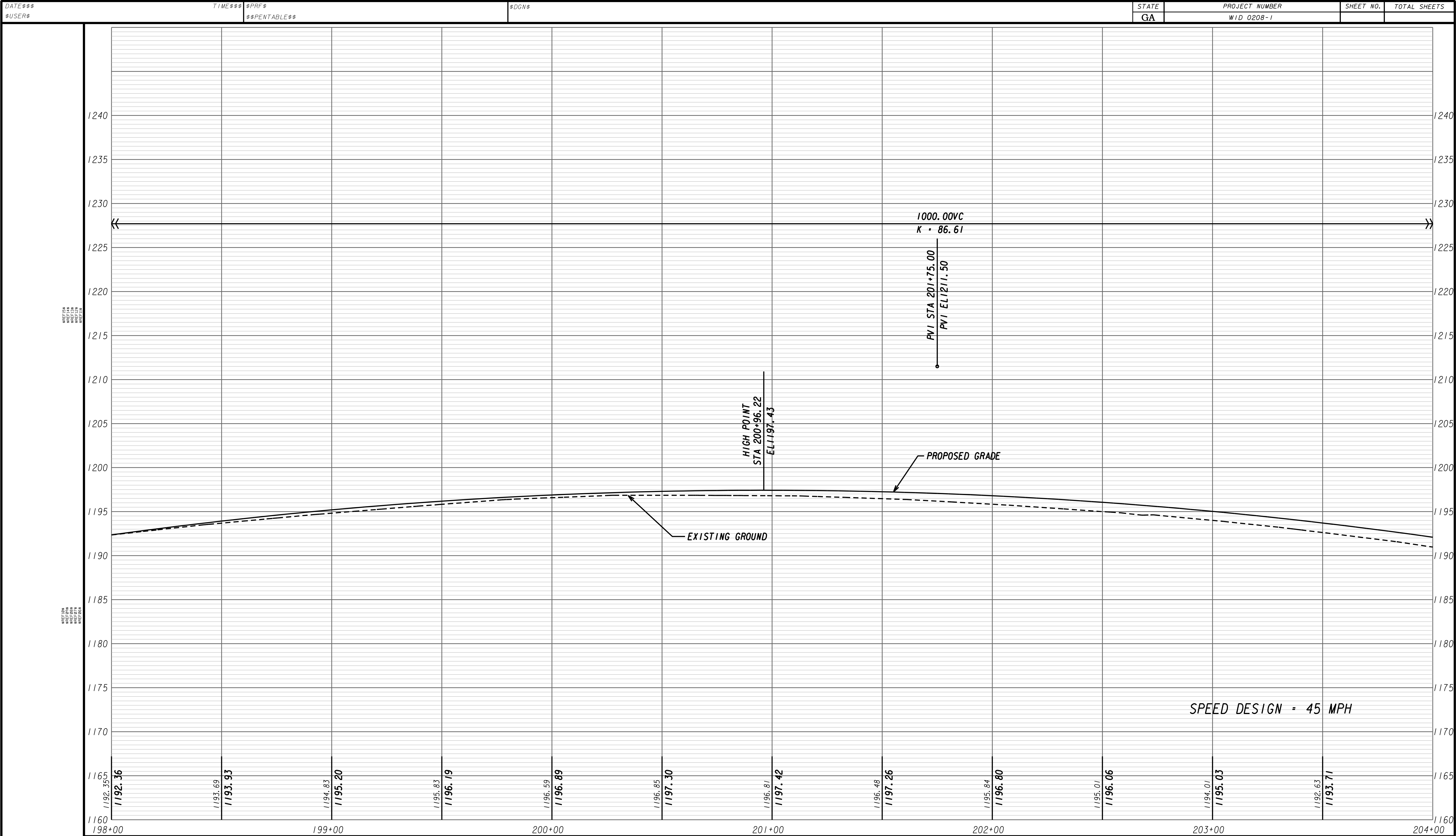
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FORSYTH COUNTY
ENGINEERING DEPARTMENT

MAINLINE PROFILE

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
15-03



3/11/2007
G20EDG

GRESHAM
SMITH AND
PARTNERS

SCALE IN FEET 1"=5' VERTICAL
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SCALE IN FEET 1"=20' HORIZONTAL
0 20 40 80

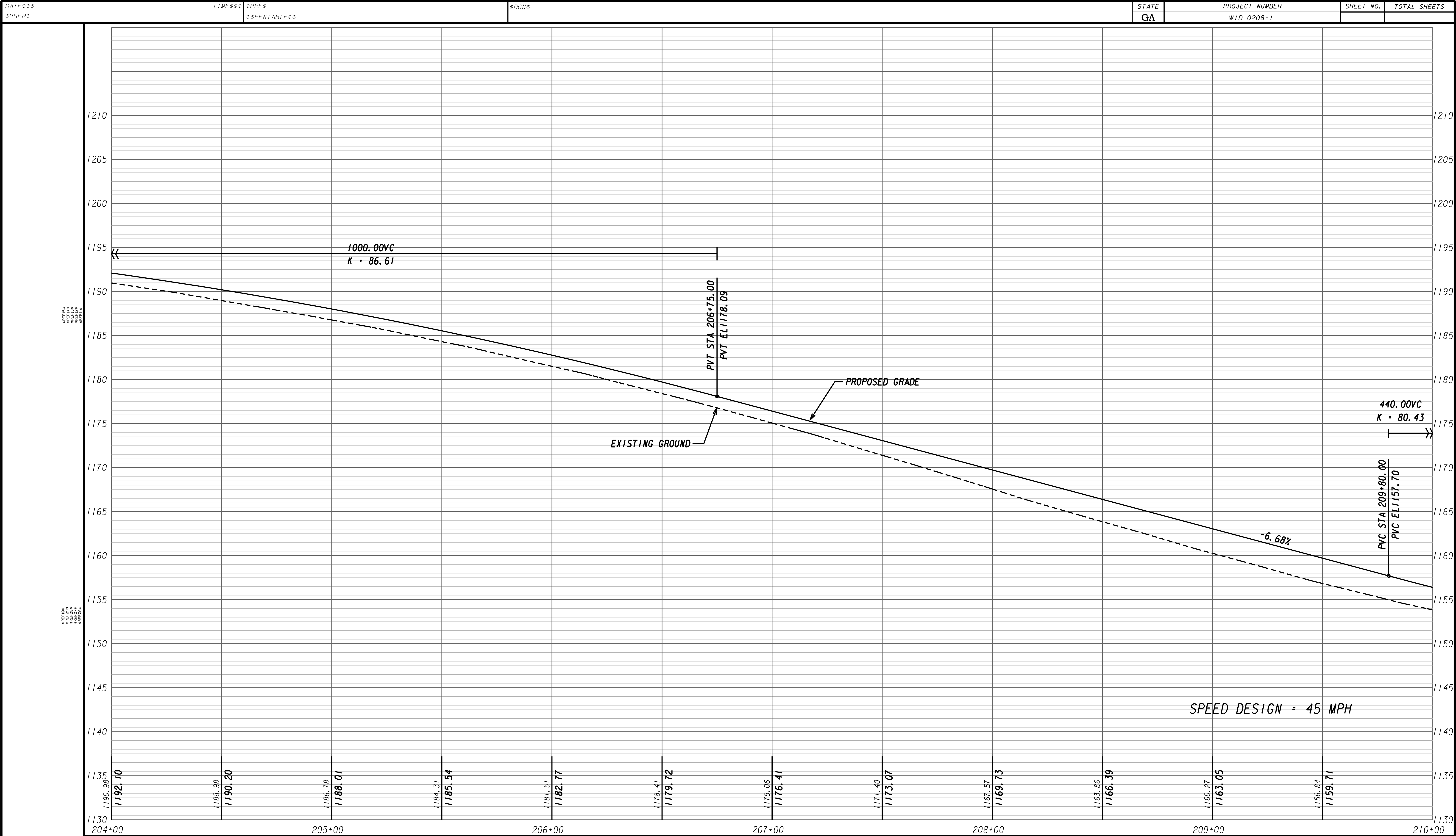
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FORSYTH COUNTY
ENGINEERING DEPARTMENT

MAINLINE PROFILE

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
15-04



3/11/2007

GS&P

GRESHAM
SMITH AND
PARTNERS

SCALE IN FEET 1"=5' VERTICAL

SCALE IN FEET 1"=20' HORIZONTAL

REVISION DATES		

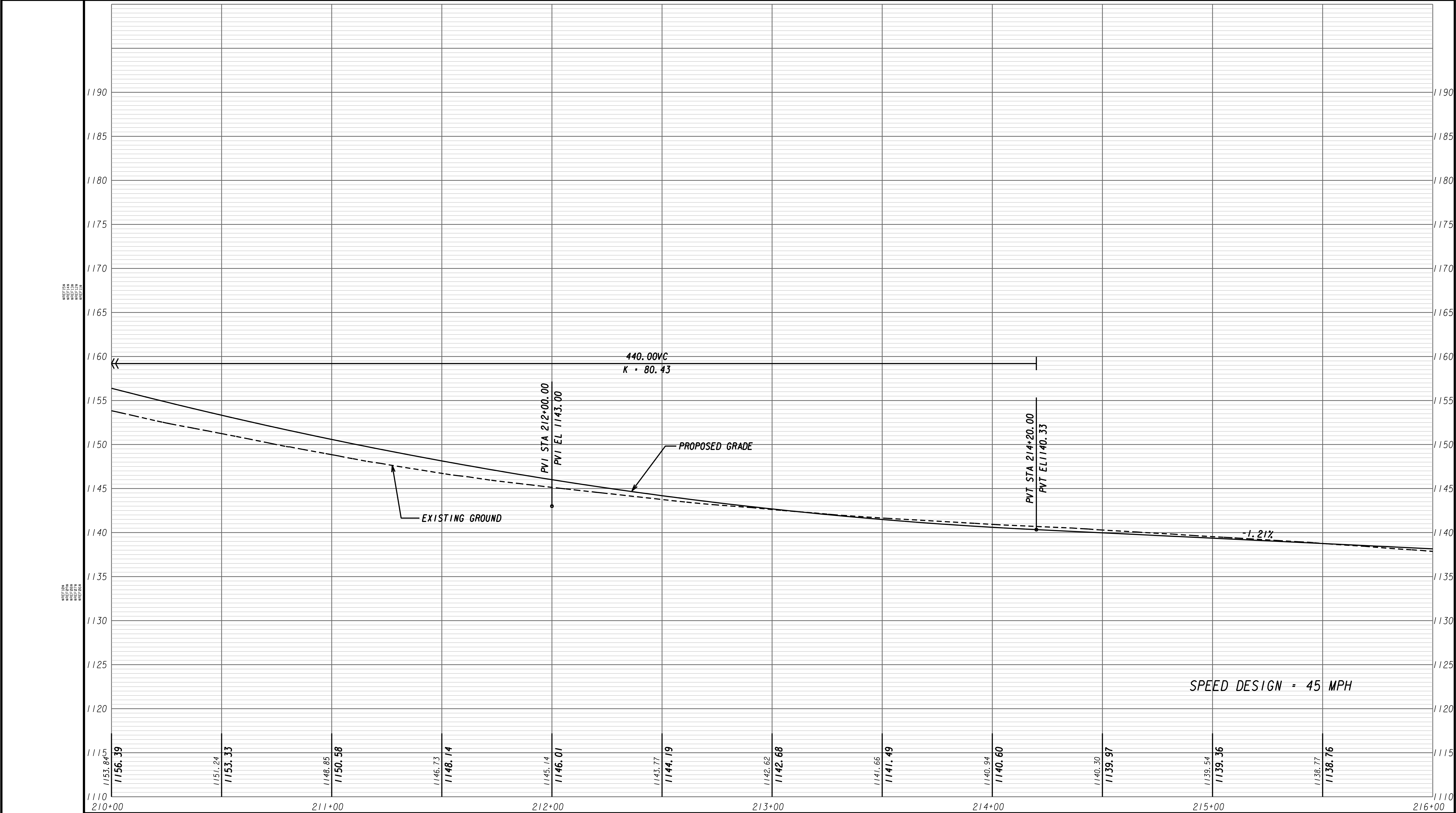
FORSYTH COUNTY
ENGINEERING DEPARTMENT

MAINLINE PROFILE

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

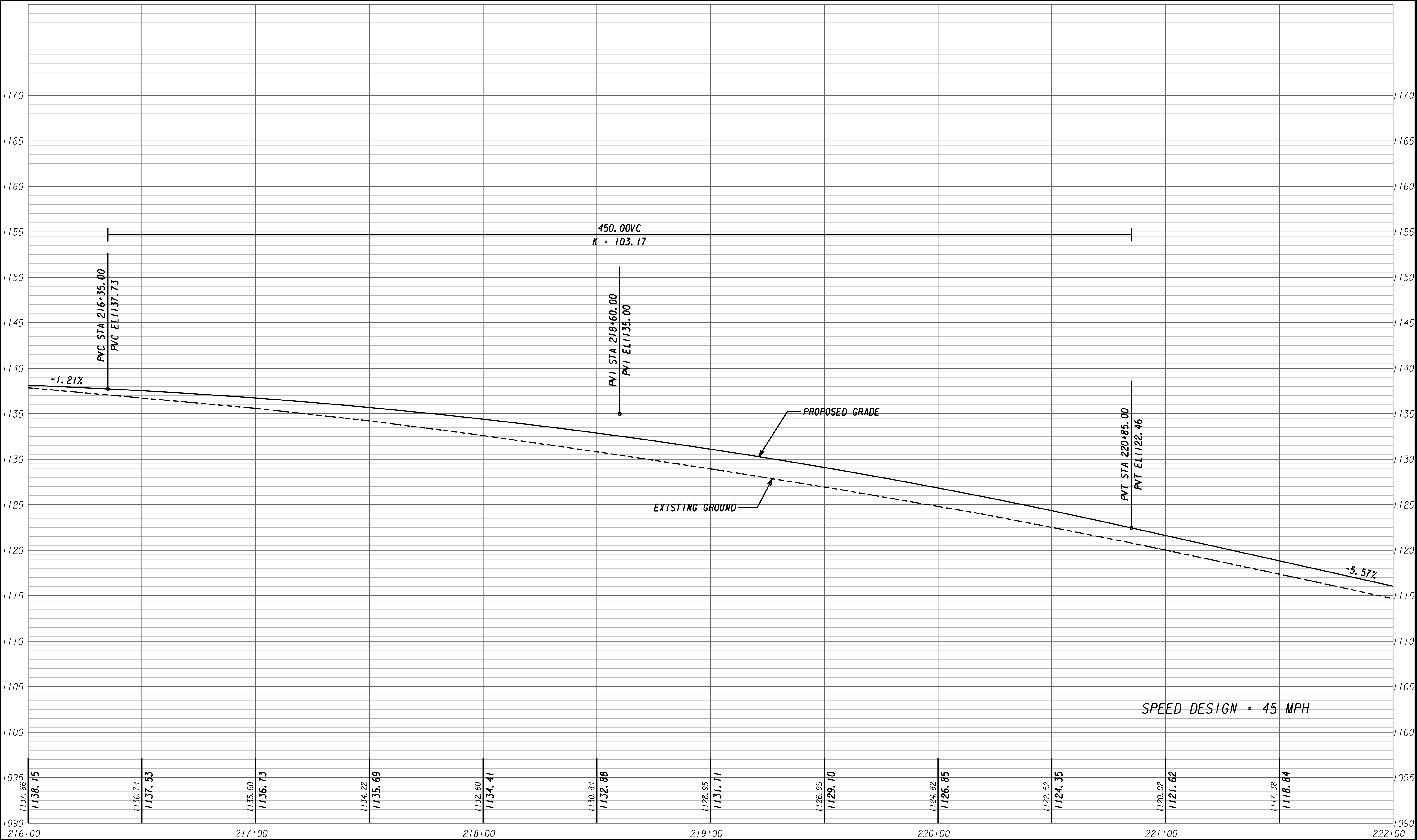
DRAWING No.

15-05



PROJECT
SHEET 14
SHEET 15
SHEET 16
SHEET 17
SHEET 18

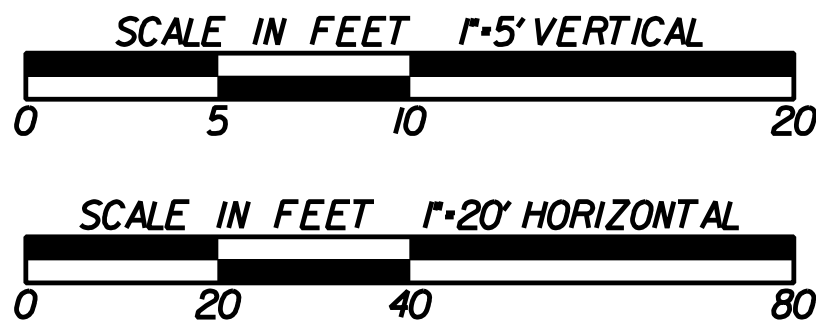
PROJECT
SHEET 18
SHEET 19
SHEET 20
SHEET 21
SHEET 22



SPEED DESIGN = 45 MPH



G R E S H A M
S M I T H A N D
P A R T N E R S



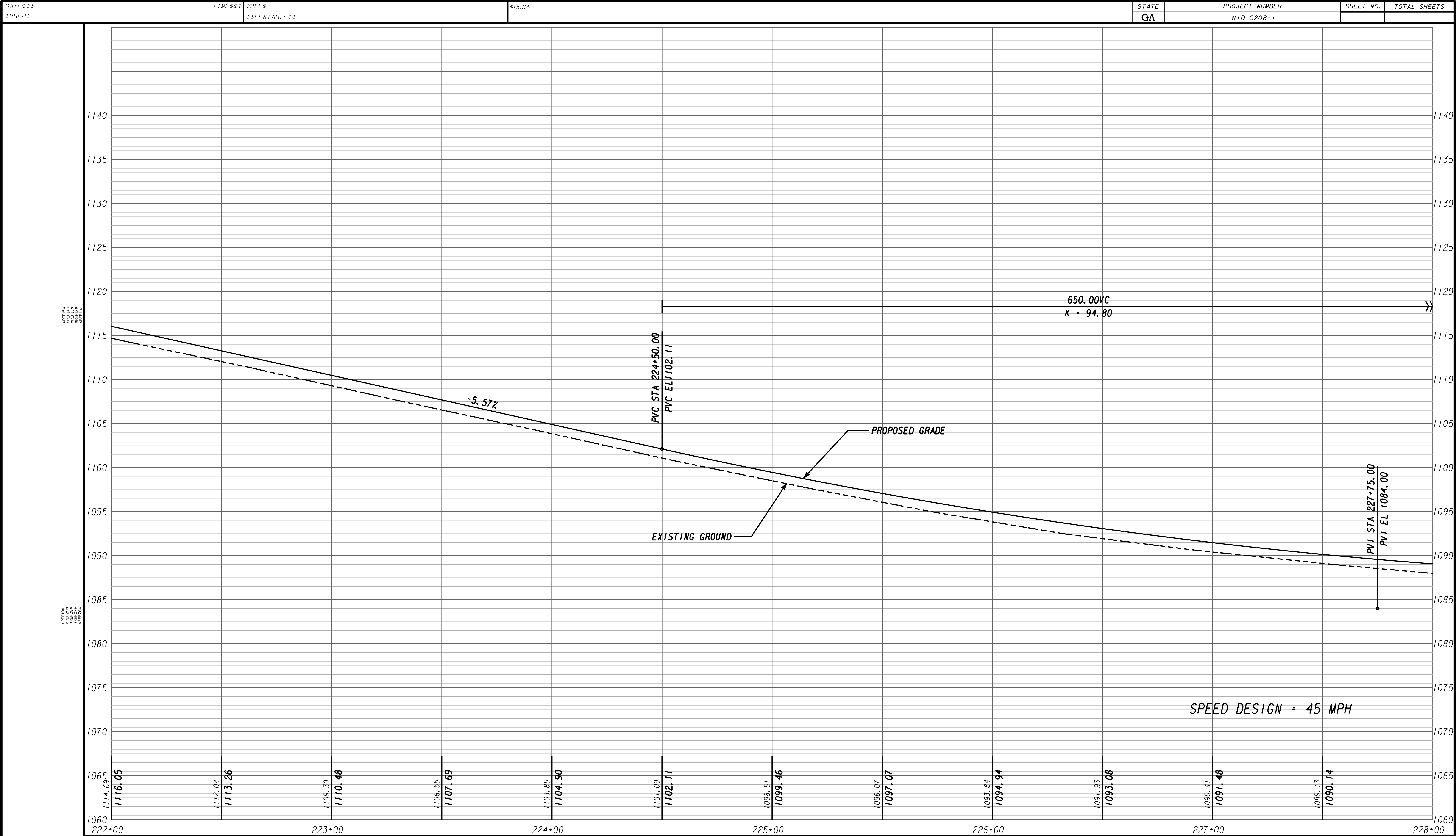
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FORSYTH COUNTY
ENGINEERING DEPARTMENT

MAINLINE PROFILE

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
15-07



3/11/2007
G20EDG
SHEET 146
SHEET 147
SHEET 148
SHEET 149
SHEET 150

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SMITH AND
PARTNERS

SCALE IN FEET 1"=5' VERTICAL
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SCALE IN FEET 1"=20' HORIZONTAL
0 20 40 80

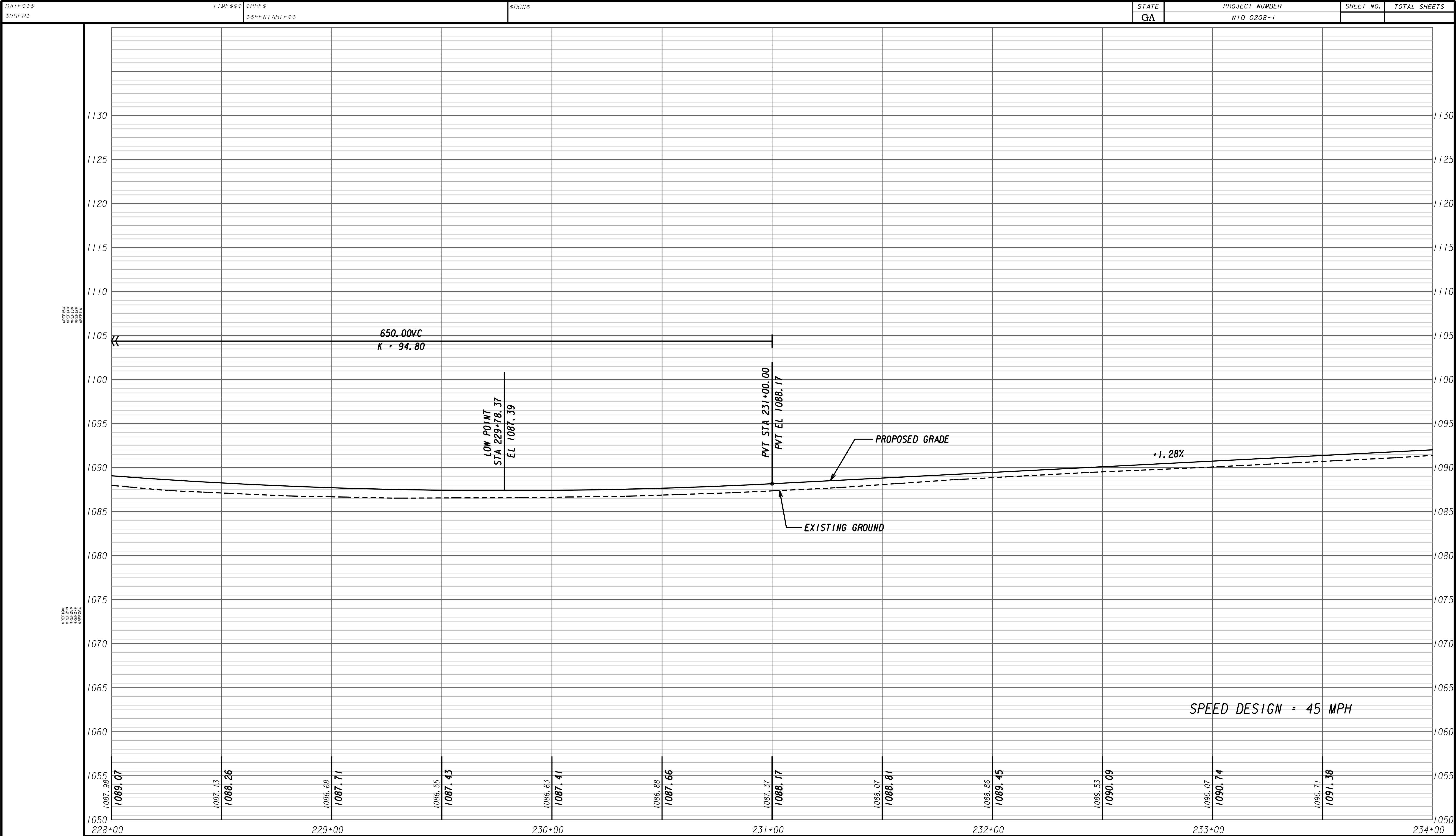
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FORSYTH COUNTY
ENGINEERING DEPARTMENT

MAINLINE PROFILE

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
15-08



3/11/2007
G20EDG

GRESHAM
SMITH AND
PARTNERS

SCALE IN FEET 1"=5' VERTICAL
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SCALE IN FEET 1"=20' HORIZONTAL
0 20 40 80

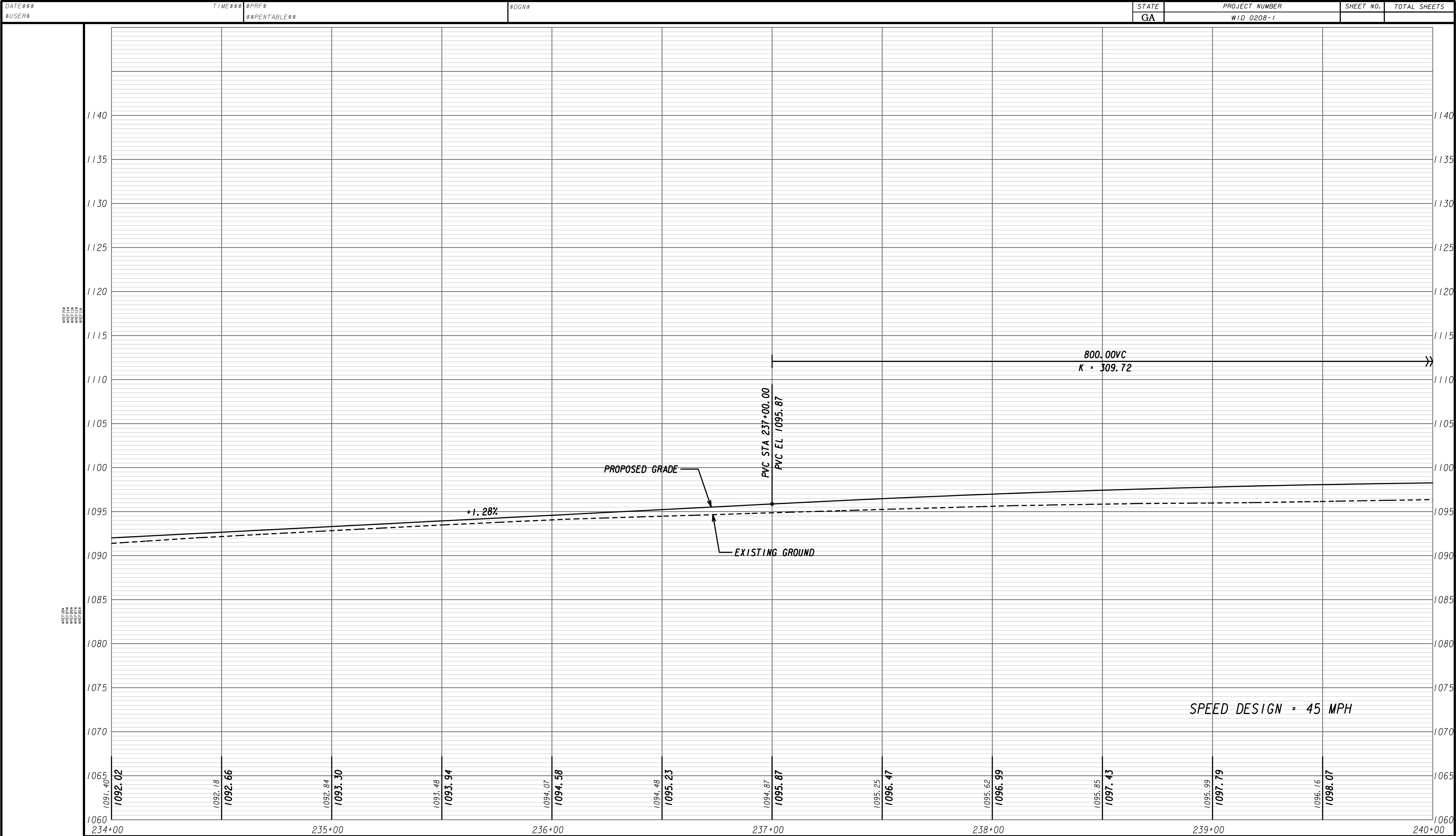
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FORSYTH COUNTY
ENGINEERING DEPARTMENT

MAINLINE PROFILE

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
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3/11/2007
G20EDG

G R E S H A M
S M I T H A N D
P A R T N E R S

SCALE IN FEET 1"=5' VERTICAL
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SCALE IN FEET 1"=20' HORIZONTAL
0 20 40 80

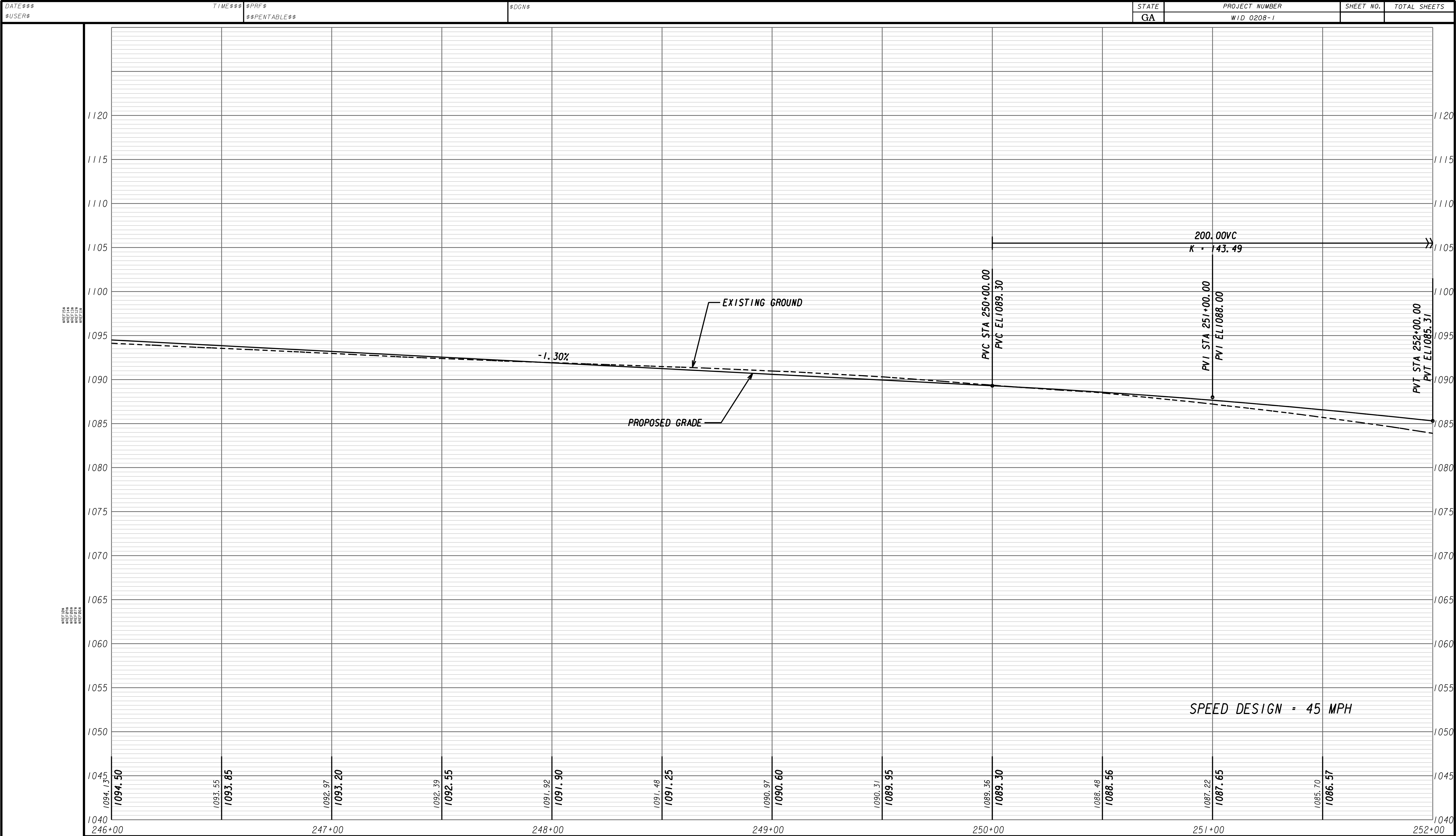
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FORSYTH COUNTY
ENGINEERING DEPARTMENT

MAINLINE PROFILE

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
15-10



3/11/2007
G20EDG

G R E S H A M
S M I T H A N D
P A R T N E R S

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SCALE IN FEET 1"=20' HORIZONTAL
0 20 40 80

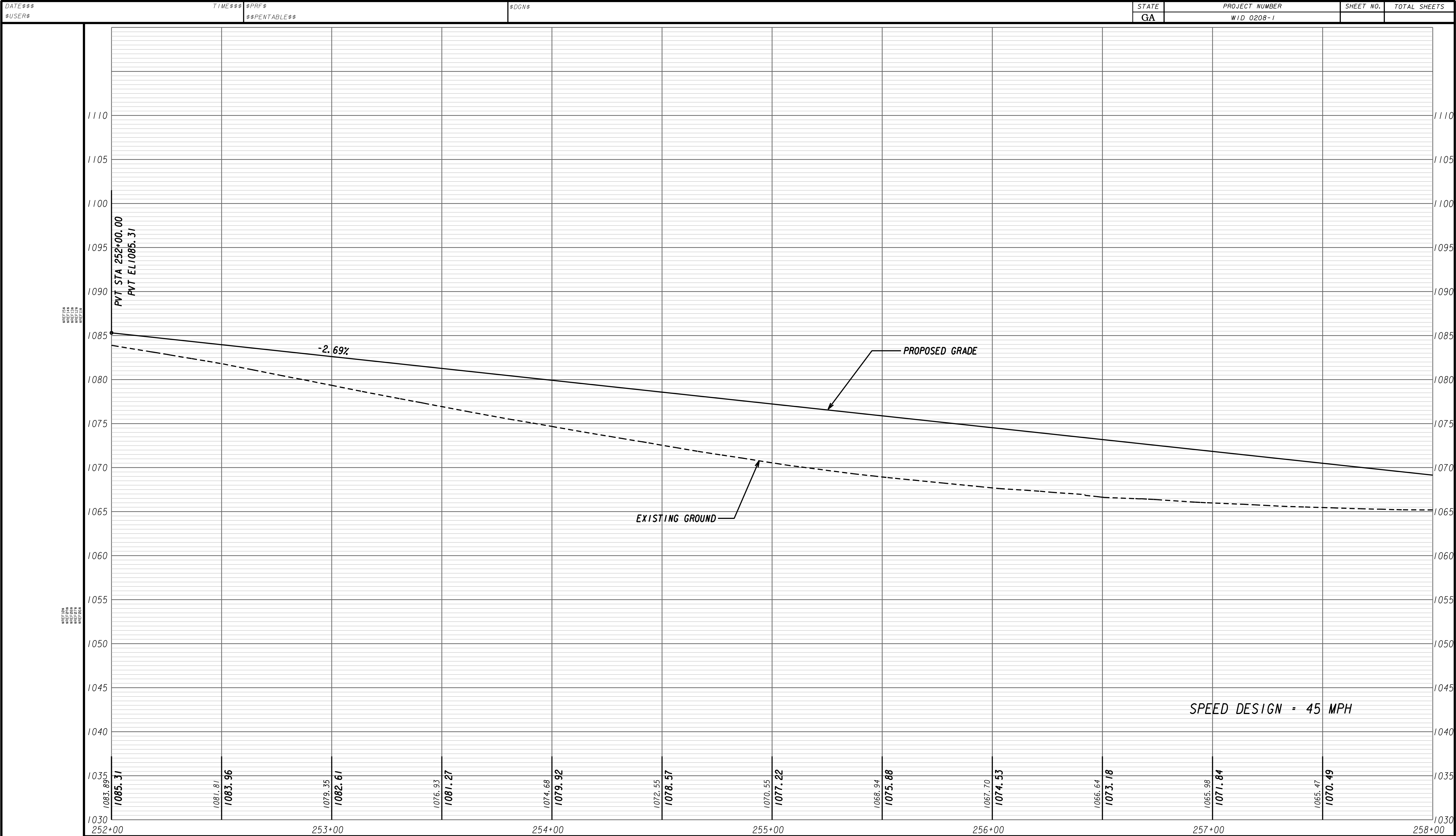
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FORSYTH COUNTY
ENGINEERING DEPARTMENT

MAINLINE PROFILE

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
15-12



3/11/2007
G20EDG

G R E S H A M
S M I T H A N D
P A R T N E R S

SCALE IN FEET 1"=5' VERTICAL
0 5 10 20

SCALE IN FEET 1"=20' HORIZONTAL
0 20 40 80

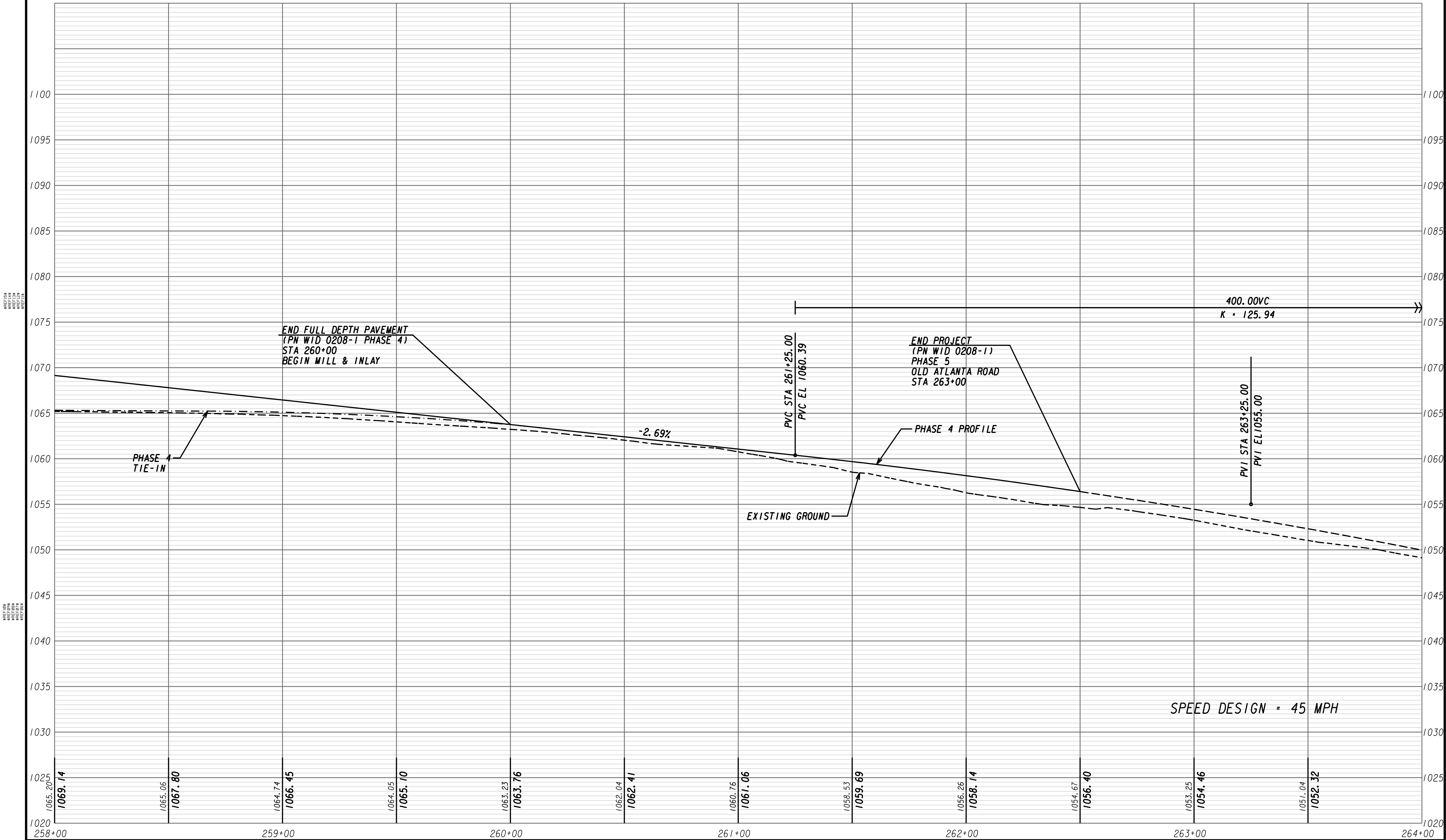
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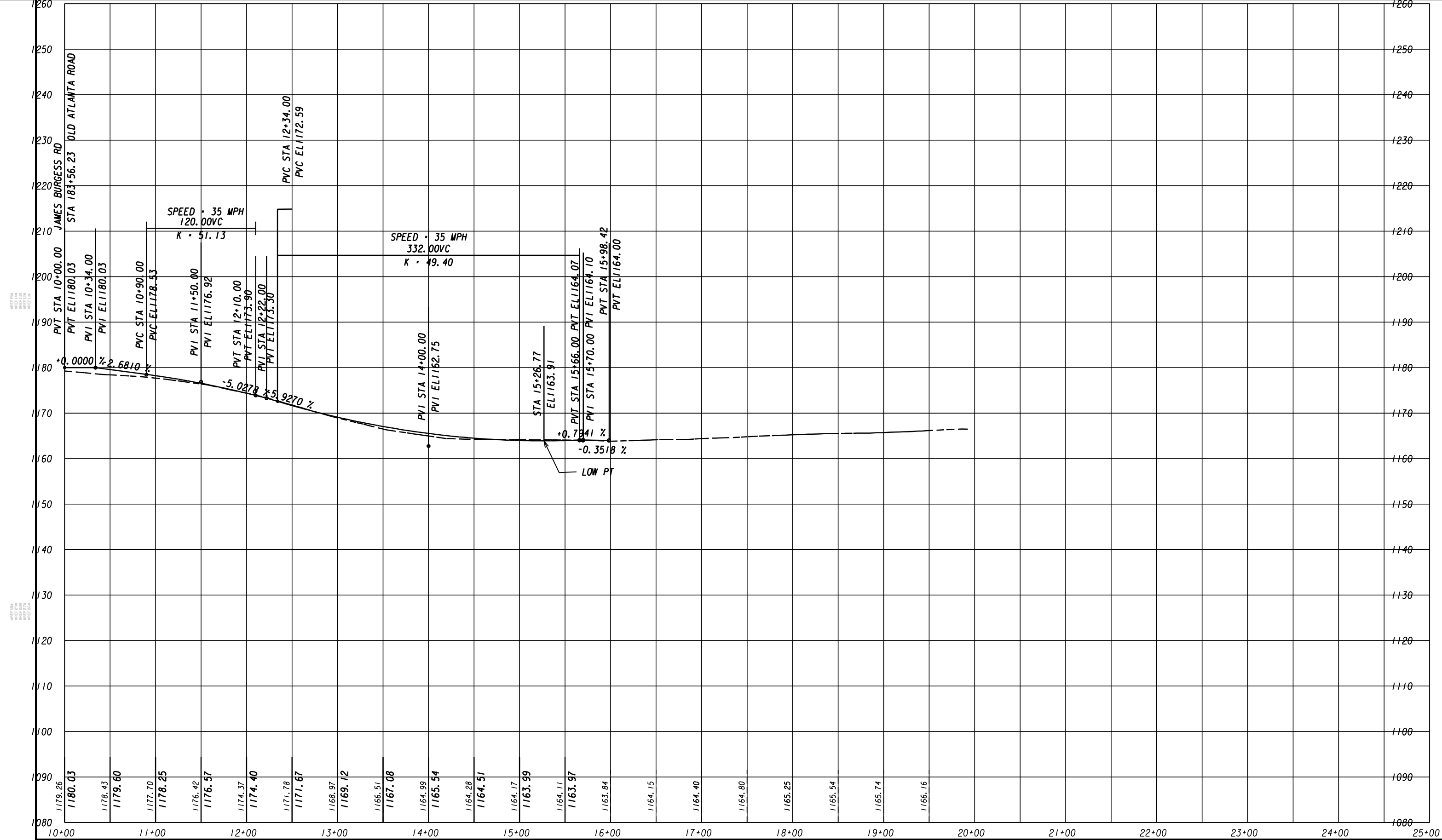
FORSYTH COUNTY
ENGINEERING DEPARTMENT

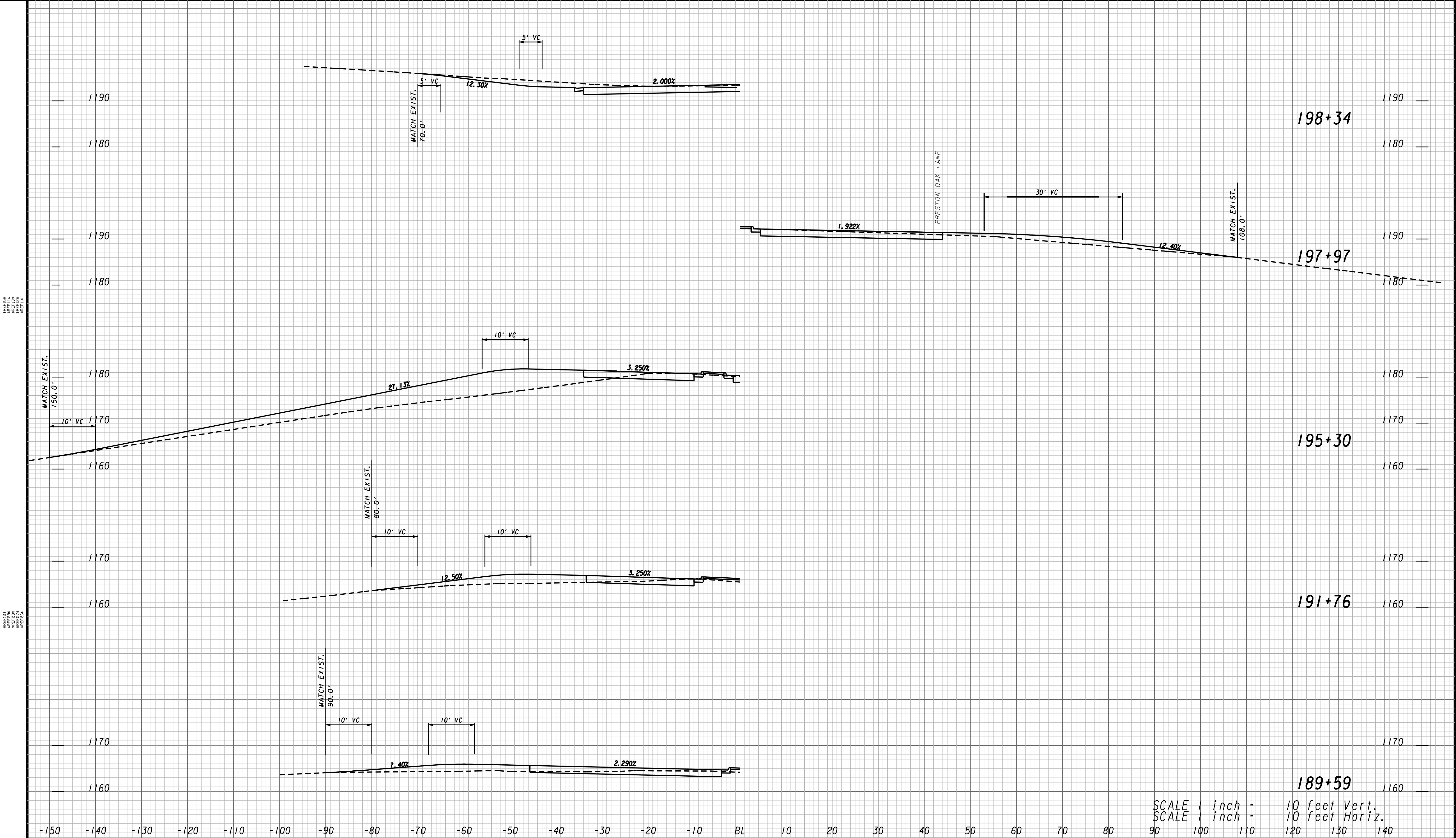
MAINLINE PROFILE

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
15-13







SCALE 1 inch = 10 feet Vert.
SCALE 1 inch = 10 feet Horiz.



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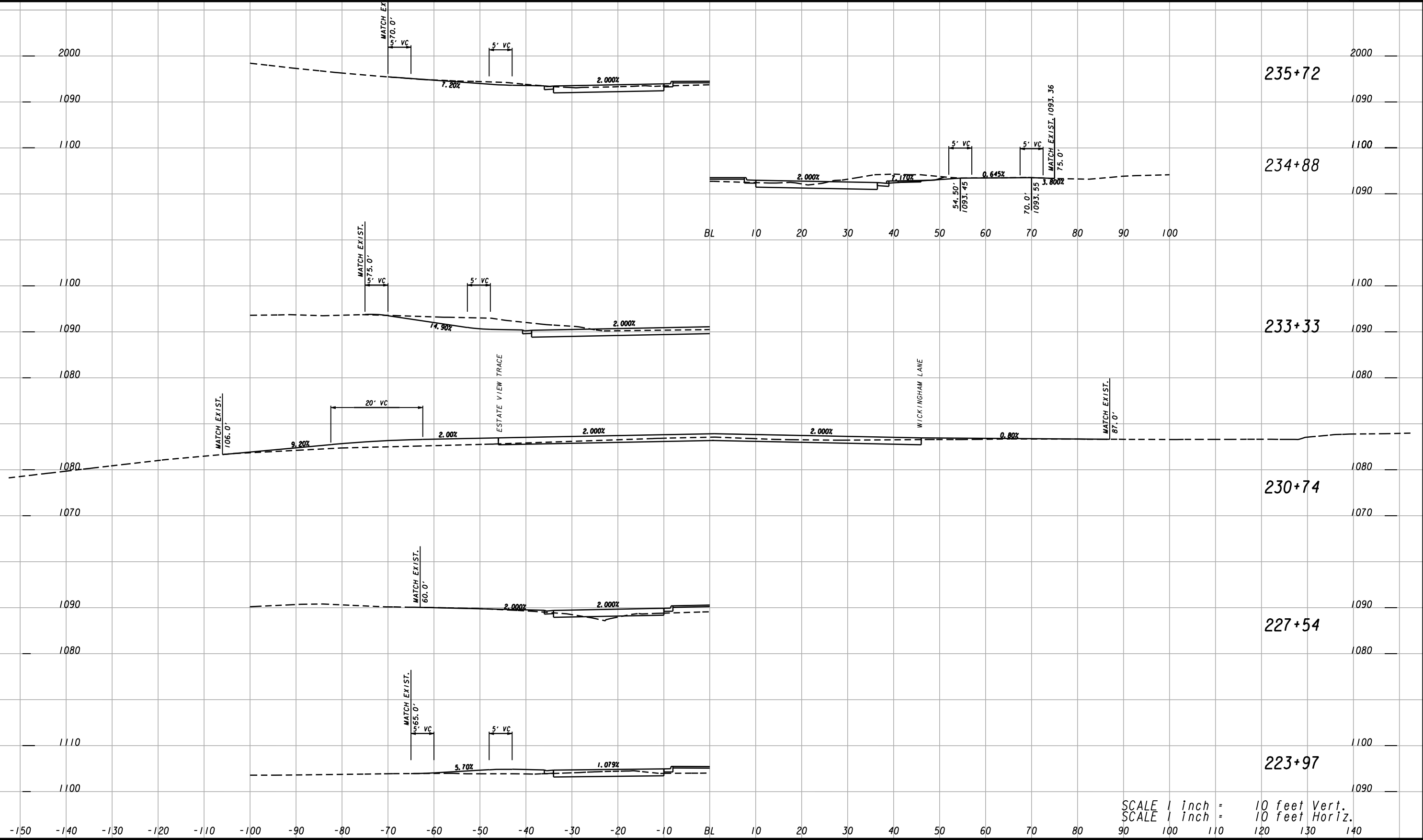
REVISION DATES

FORSYTH COUNTY
ENGINEERING DEPARTMENT

DRIVEWAY PROFILES

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
17-01



SCALE 1 inch = 10 feet Vert.
SCALE 1 inch = 10 feet Horiz.



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REVISION DATES

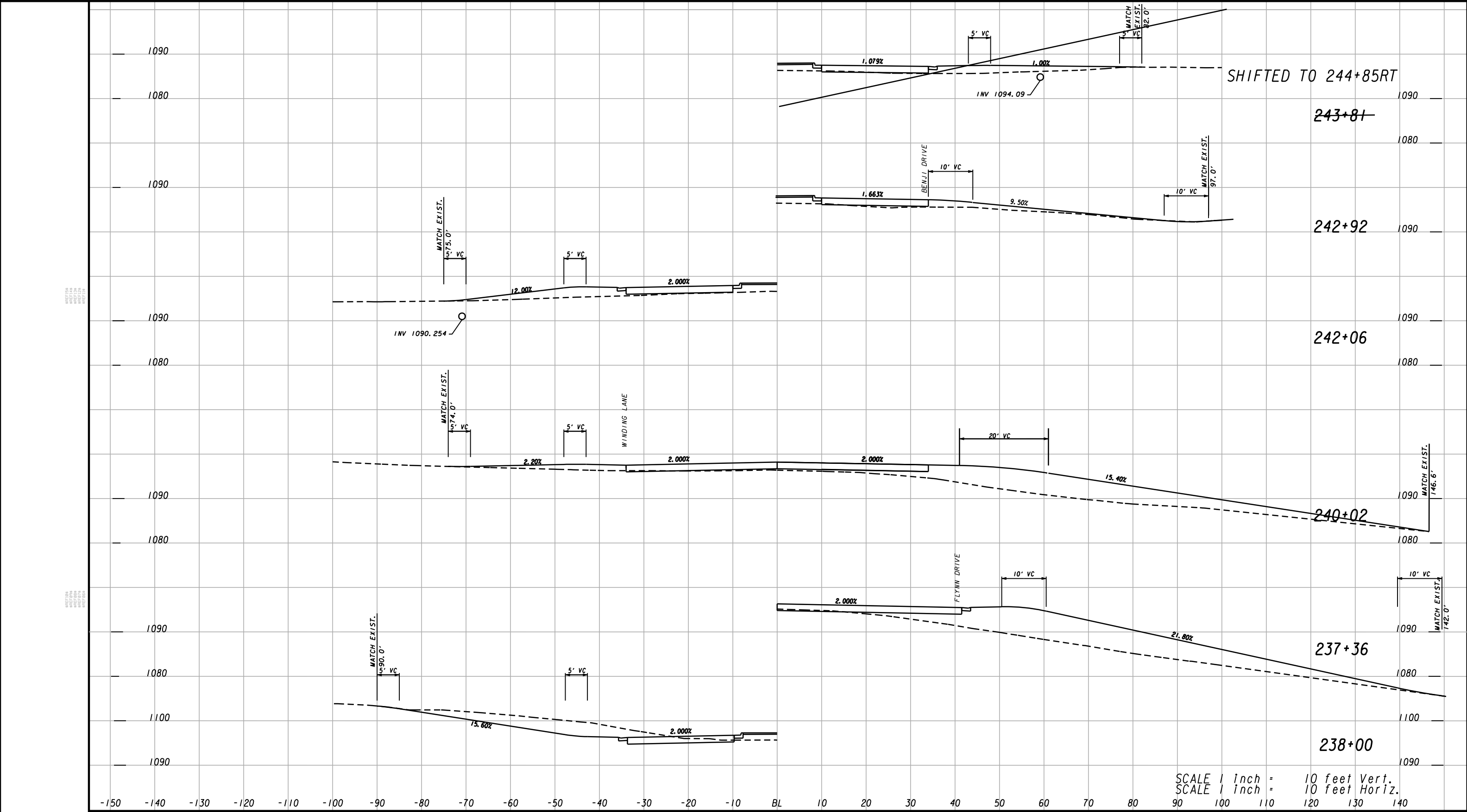
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FORSYTH COUNTY
ENGINEERING DEPARTMENT

DRIVEWAY PROFILES

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
17-03



SCALE 1 inch = 10 feet Vert.
SCALE 1 inch = 10 feet Horiz.



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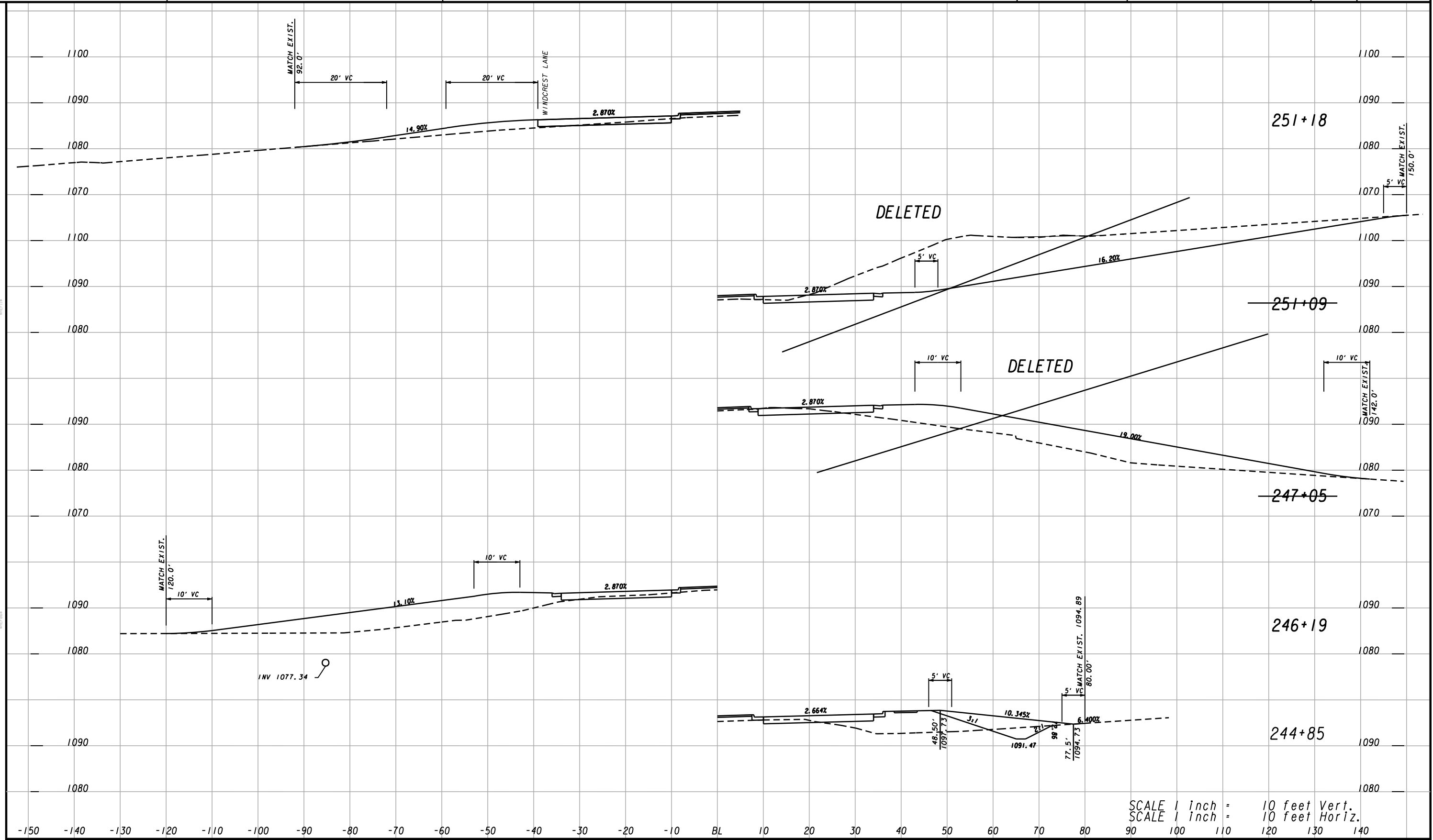
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4-17-20	

FORSYTH COUNTY
ENGINEERING DEPARTMENT

DRIVEWAY PROFILES

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
17-04



SCALE	1 inch	=	10 feet	Vert.
SCALE	1 inch	=	10 feet	Horiz.

<div> <div>REVISION DATES</div> <div>4-17-20</div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> </div>			<div> <div>FORSYTH COUNTY</div> <div>ENGINEERING DEPARTMENT</div> </div>	
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SCALE 1 inch = 10 feet Vert.
SCALE 1 inch = 10 feet Horiz.

REVISION DATES

FORSYTH COUNTY
ENGINEERING DEPARTMENT

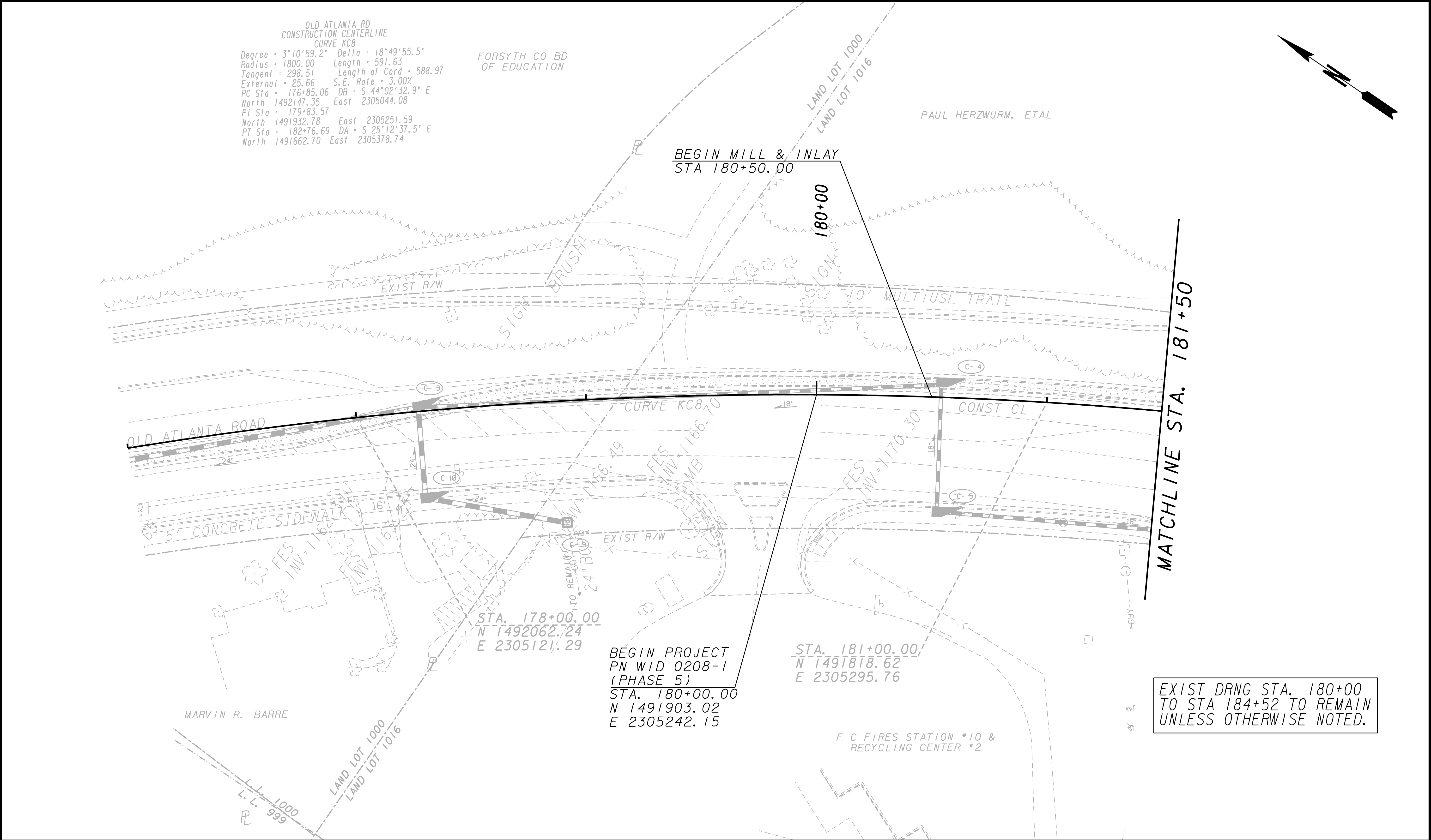
DRIVEWAY PROFILES

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
17-06



G R E S H A M
S M I T H A N D
P A R T N E R S



EXISTING R/W & PROPERTY LINE

REQUIRED R/W LINE

CONSTRUCTION LIMITS

EASEMENT FOR CONSTRUCTION & MAINT. OF SLOPES & UTILITIES

EASEMENT FOR CONSTR OF SLOPES

EASEMENT FOR CONSTR OF DRIVES

BEGIN LIMIT OF ACCESSBLA

END LIMIT OF ACCESSELA

LIMIT OF ACCESS

R/W AND LIMIT OF ACCESS

G R E S H A M
S M I T H A N D
P A R T N E R S

SCALE IN FEET

0 20 40 80

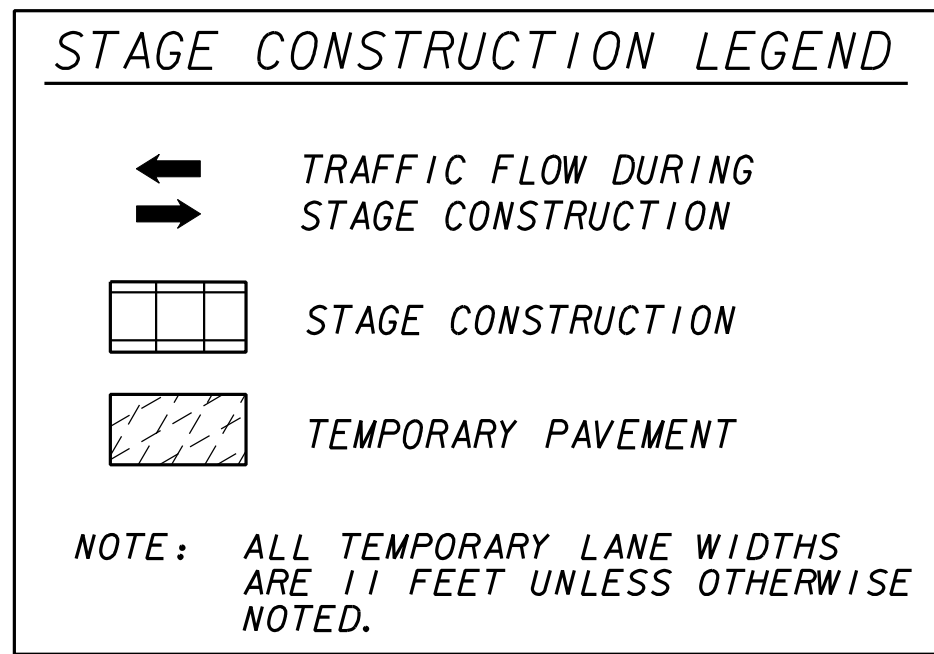
REVISION DATES

FORSYTH COUNTY
ENGINEERING DEPARTMENT

CONSTRUCTION STAGING PLAN
STAGE I

WID 0208-2 & 0208-3
FORSYTH COUNTY

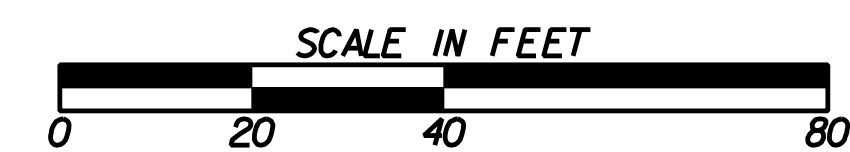
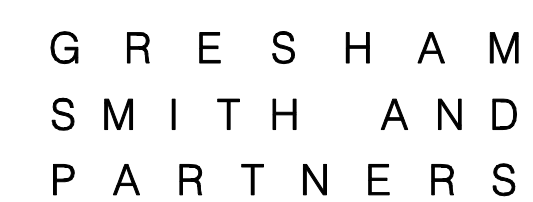
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19-01



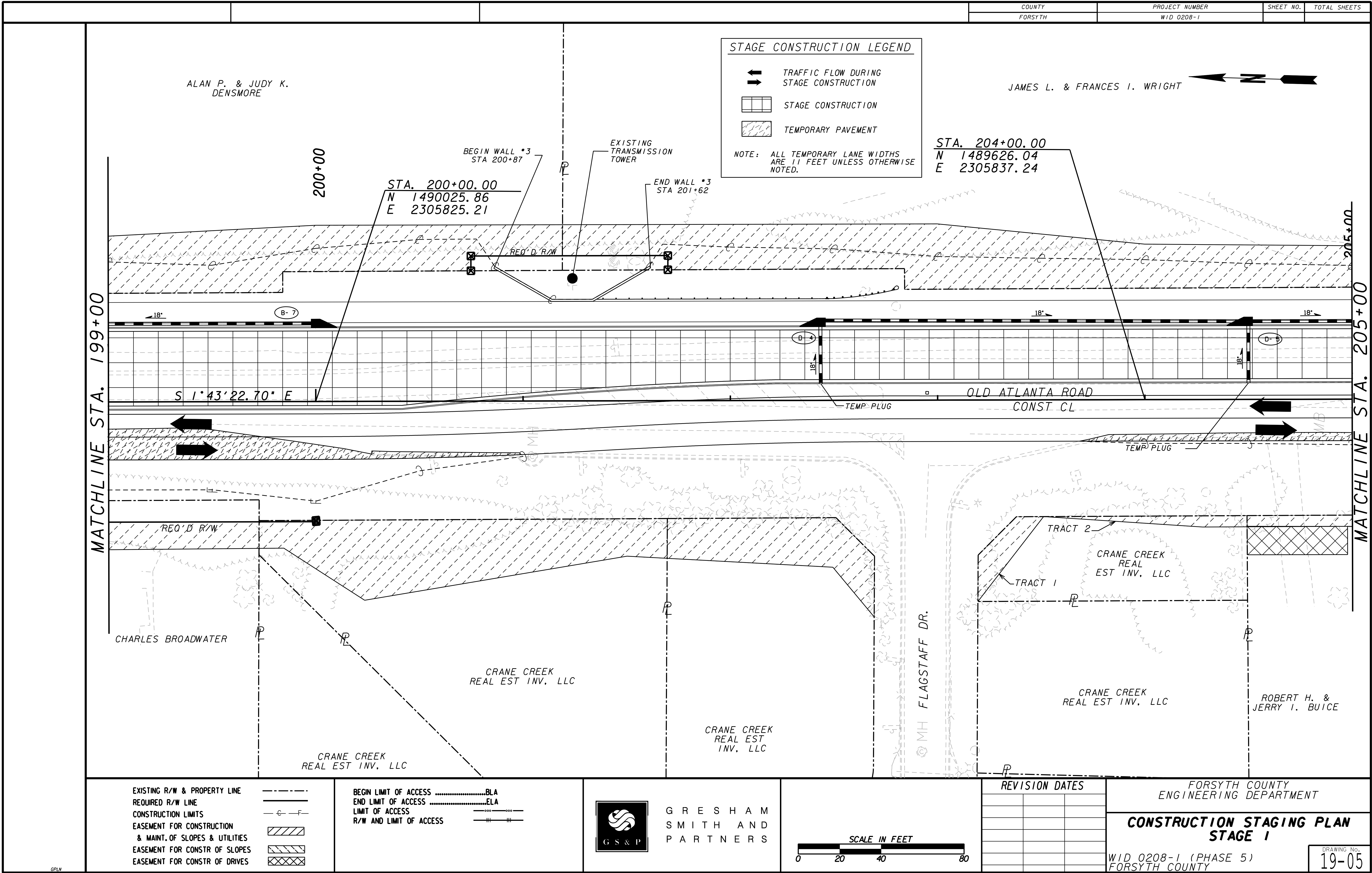
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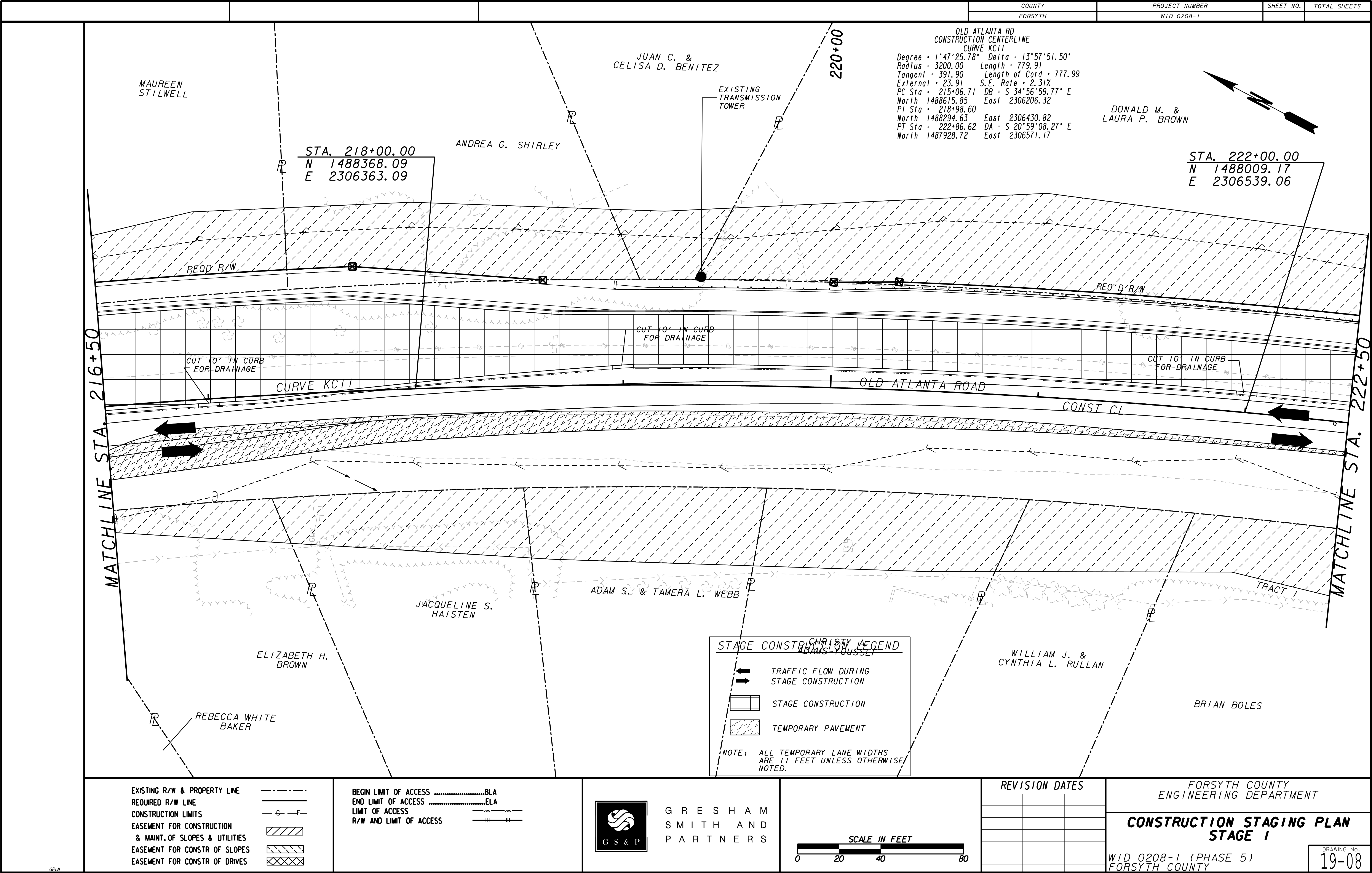
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LIMIT OF ACCESS                ---000---000---
R/W AND LIMIT OF ACCESS        ---III---III---

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DRAWING No.
9-04



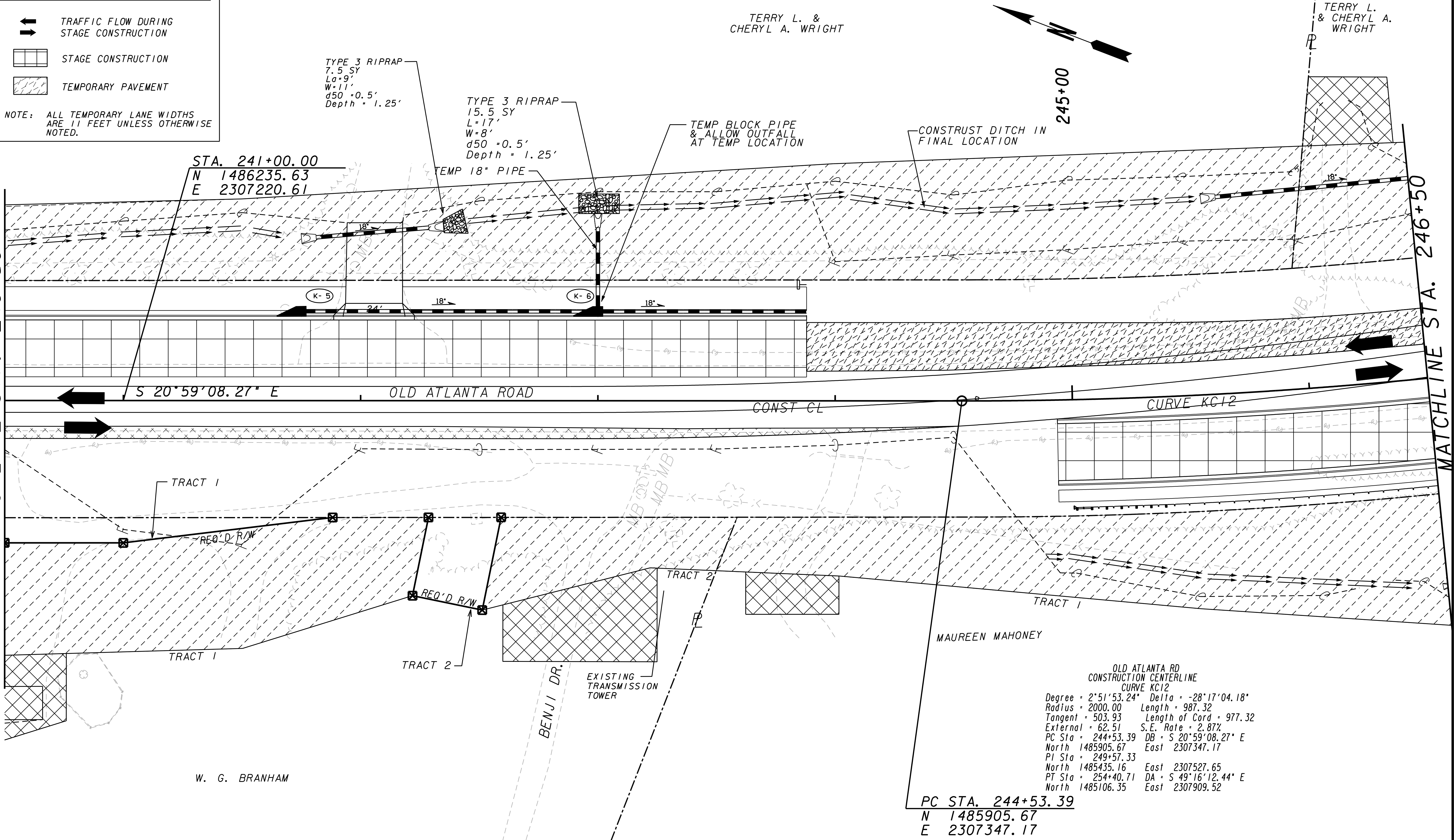


STAGE CONSTRUCTION LEGEND

- TRAFFIC FLOW DURING
STAGE CONSTRUCTION
- STAGE CONSTRUCTION
- TEMPORARY PAVEMENT

NOTE: ALL TEMPORARY LANE WIDTHS
ARE 11 FEET UNLESS OTHERWISE
NOTED.

MATCHLINE STA. 240+50



- EXISTING R/W & PROPERTY LINE
- REQUIRED R/W LINE
- CONSTRUCTION LIMITS
- EASEMENT FOR CONSTRUCTION
& MAINT. OF SLOPES & UTILITIES
- EASEMENT FOR CONSTR OF SLOPES
- EASEMENT FOR CONSTR OF DRIVES

- BEGIN LIMIT OF ACCESS
- END LIMIT OF ACCESS
- LIMIT OF ACCESS
- R/W AND LIMIT OF ACCESS



GRESHAM
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PARTNERS



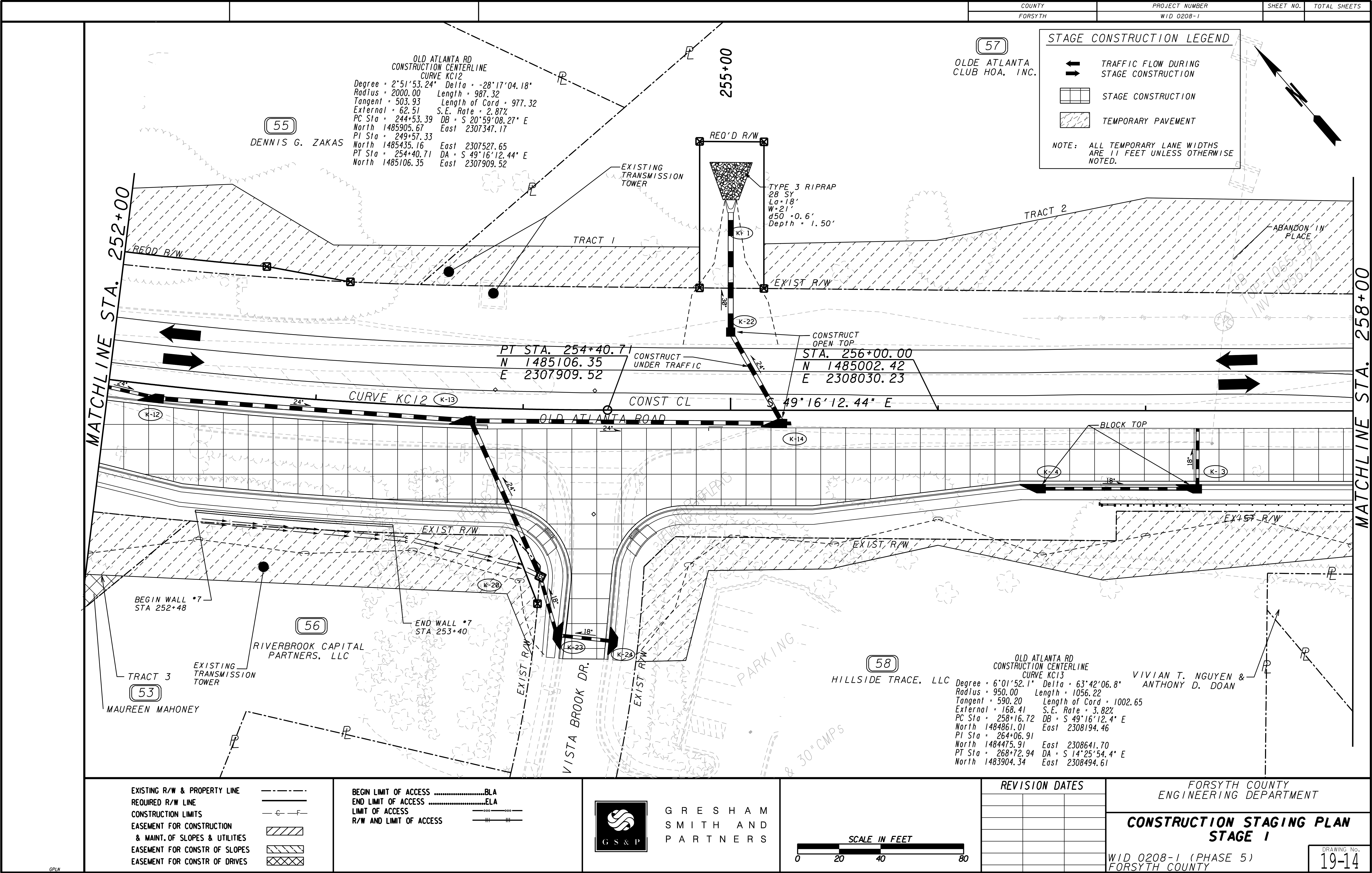
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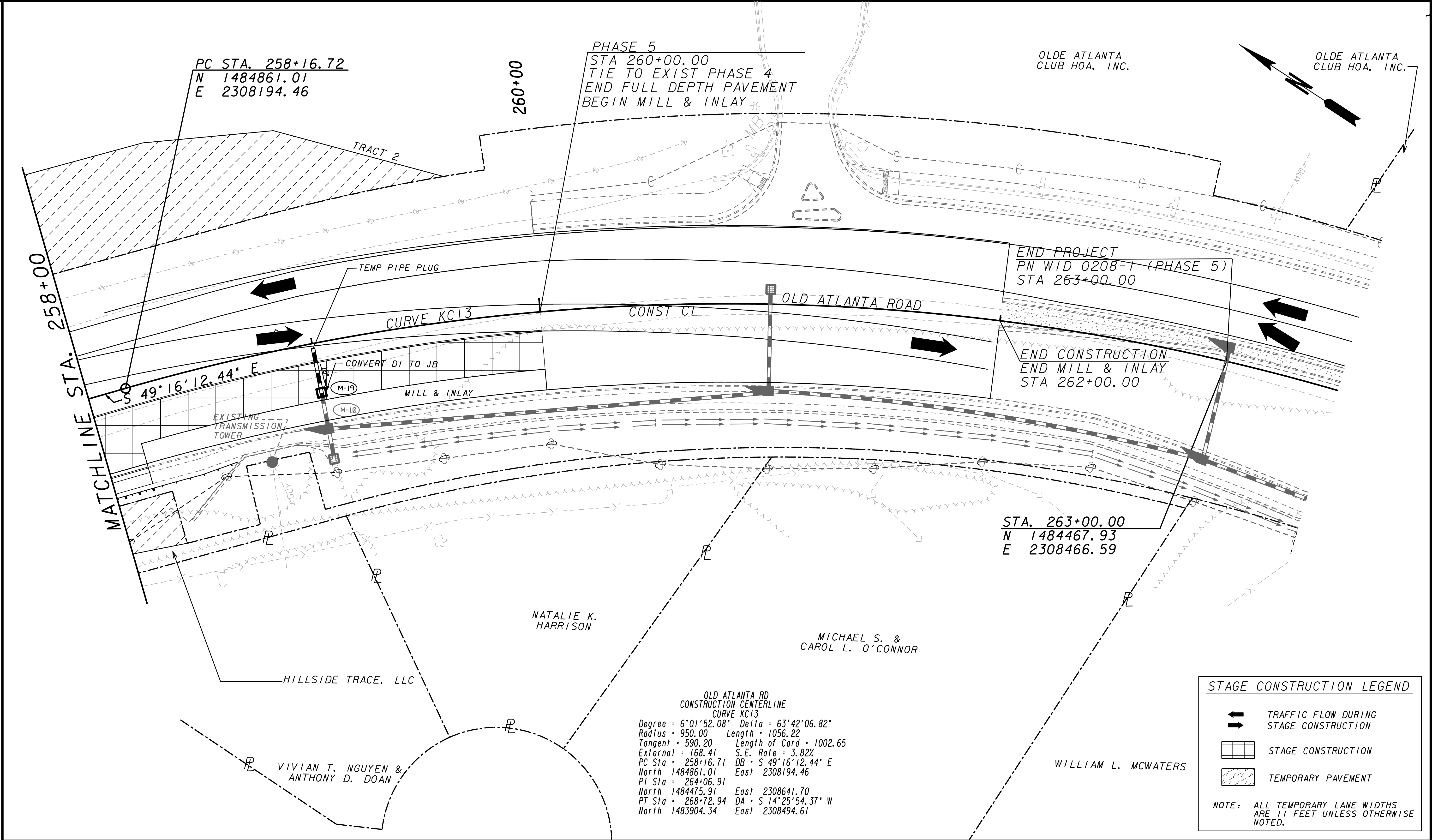
FORSYTH COUNTY
ENGINEERING DEPARTMENT

CONSTRUCTION STAGING PLAN
STAGE I

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
19-12





EXISTING R/W & PROPERTY LINE
REQUIRED R/W LINE
CONSTRUCTION LIMITS
EASEMENT FOR CONSTRUCTION & MAINT. OF SLOPES & UTILITIES
EASEMENT FOR CONSTR OF SLOPES
EASEMENT FOR CONSTR OF DRIVES

21 F

BEGIN LIMIT OF ACCESSBLA
END LIMIT OF ACCESSELA
LIMIT OF ACCESS
R/W AND LIMIT OF ACCESS

GRESHAM
SMITH AND
PARTNERS

SCALE IN FEET
0 20 40 80

REVISION DATES

FORSYTH COUNTY
ENGINEERING DEPARTMENT

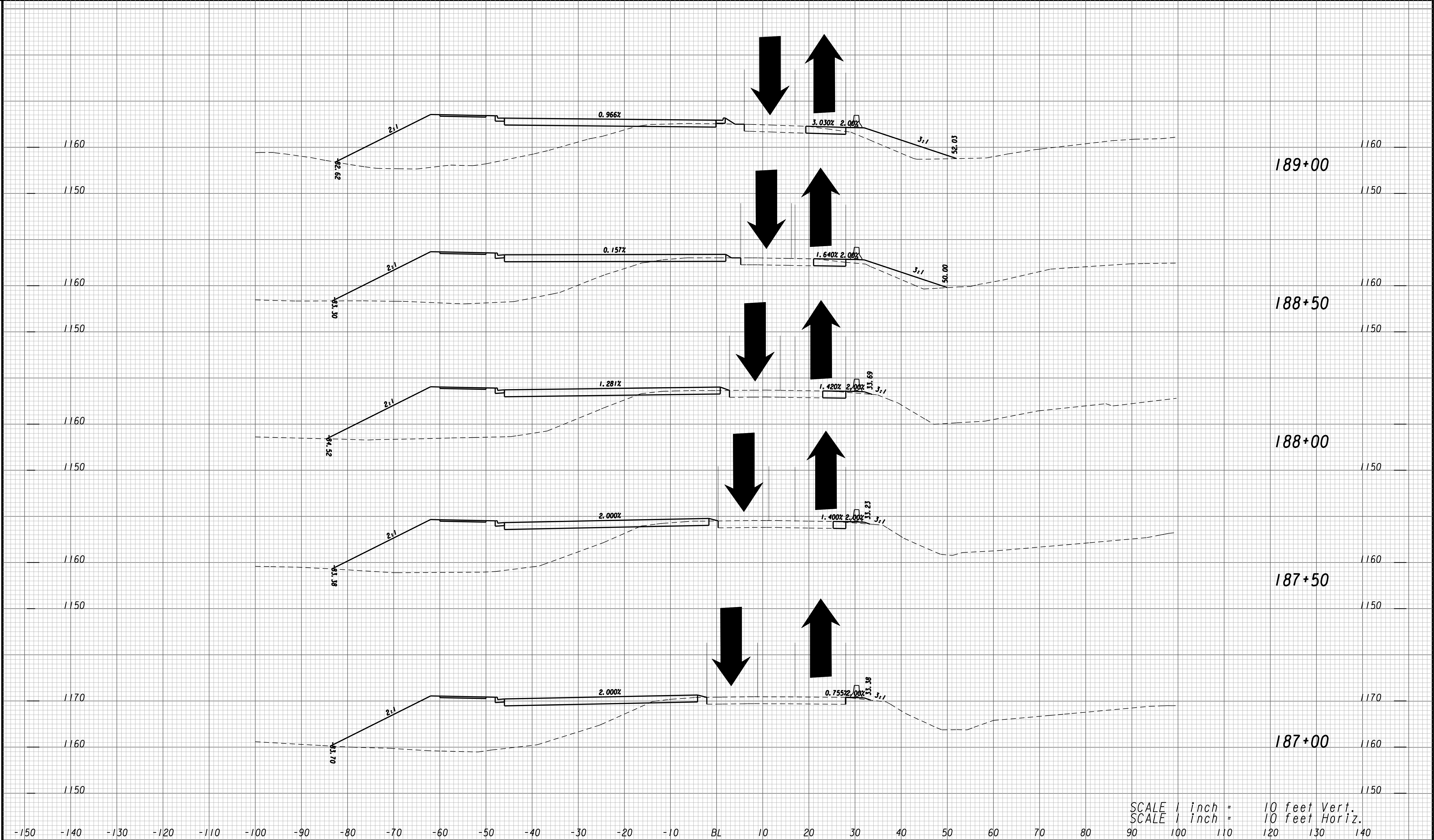
CONSTRUCTION STAGING PLAN
STAGE I

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
19-15

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SCALE 1 inch = 10 feet Vert.
SCALE 1 inch = 10 feet Horiz.



GRESHAM
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PARTNERS

REVISION DATES

FORSYTH COUNTY
ENGINEERING DEPARTMENT

**STAGING CROSS SECTIONS
STAGE 1**

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

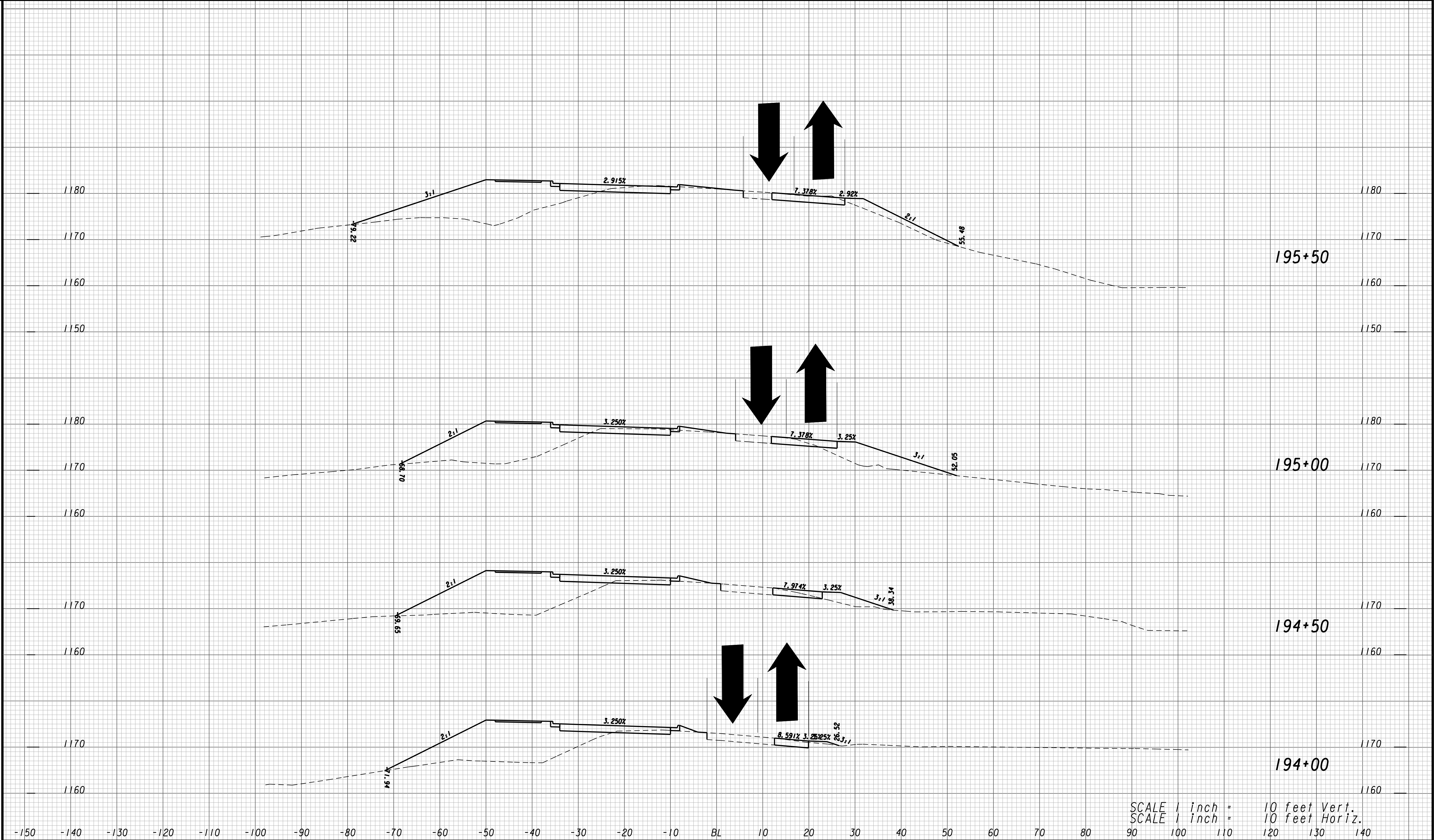
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19-16

SUXSEW

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SCALE 1 inch = 10 feet Vert.
SCALE 1 inch = 10 feet Horiz.



GRESHAM
SMITH AND
PARTNERS

REVISION DATES

FORSYTH COUNTY
ENGINEERING DEPARTMENT

**STAGING CROSS SECTIONS
STAGE I**

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
19-19

REF 105
REF 106
REF 107
REF 108
REF 109
REF 110
REF 111

REF 105
REF 106
REF 107
REF 108
REF 109
REF 110
REF 111

SUXSEW
REF 105
REF 106
REF 107
REF 108
REF 109
REF 110
REF 111



SCALE 1 inch = 10 feet Vert.
SCALE 1 inch = 10 feet Horiz.



GRESHAM
SMITH AND
PARTNERS

REVISION DATES

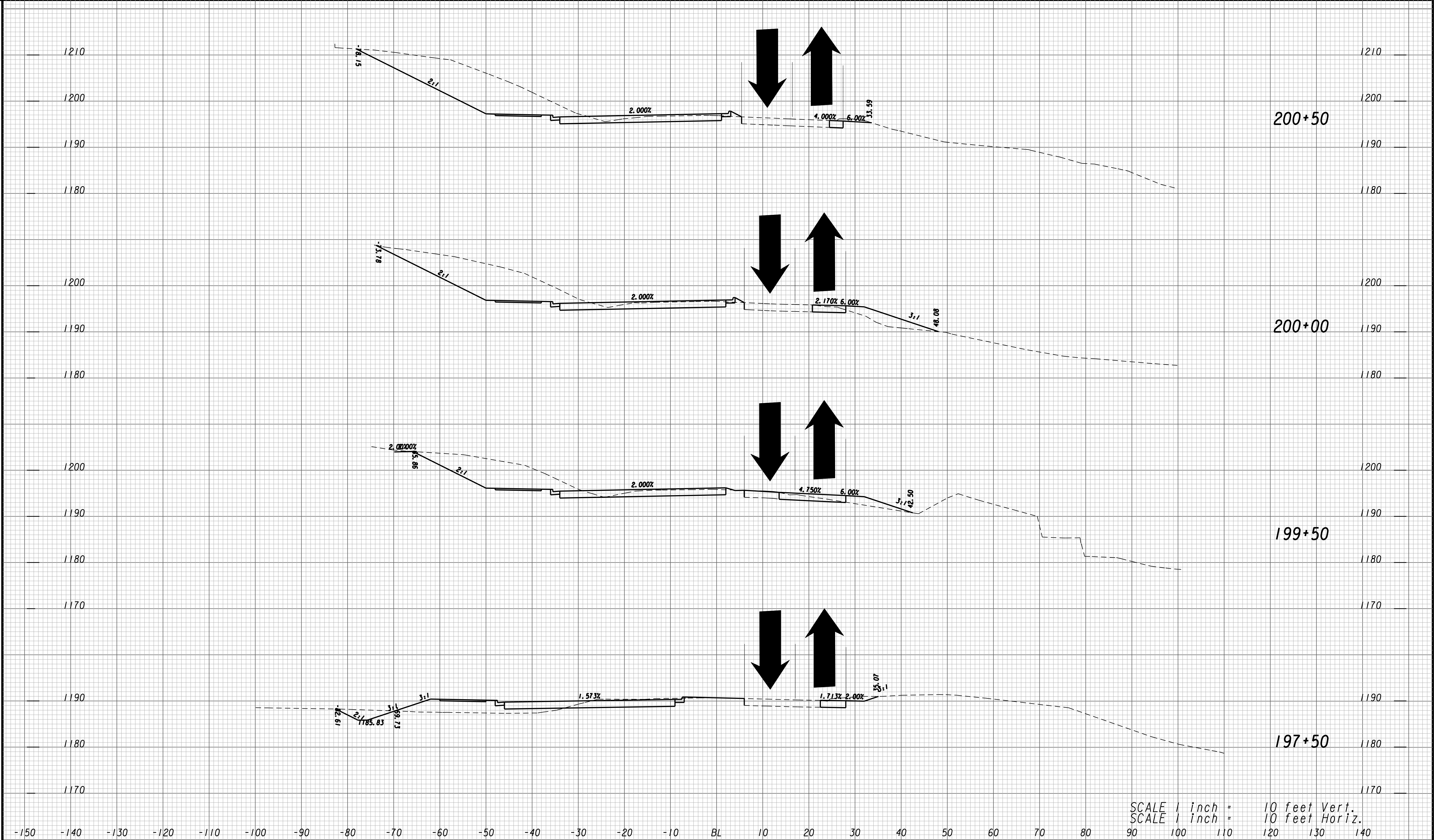
FORSYTH COUNTY
ENGINEERING DEPARTMENT

STAGING CROSS SECTIONS
STAGE 1

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
19-20

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REF 107
REF 108
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SCALE 1 inch = 10 feet Vert.
SCALE 1 inch = 10 feet Horiz.



GRESHAM
SMITH AND
PARTNERS

REVISION DATES

FORSYTH COUNTY
ENGINEERING DEPARTMENT

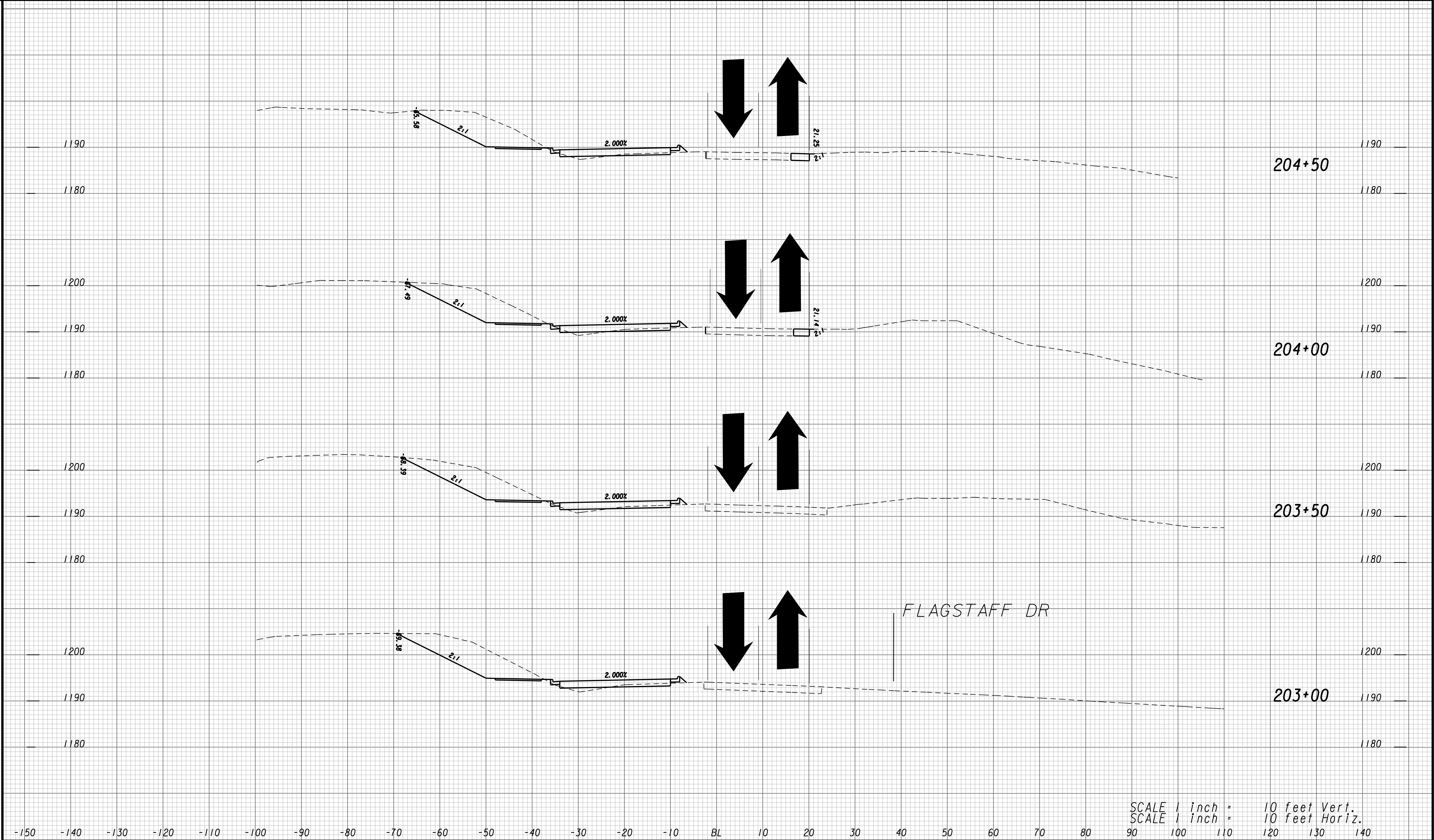
**STAGING CROSS SECTIONS
STAGE 1**

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
19-21

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SCALE 1 inch = 10 feet Vert.
SCALE 1 inch = 10 feet Horiz.

REVISION DATES

FORSYTH COUNTY
ENGINEERING DEPARTMENT

**STAGING CROSS SECTIONS
STAGE I**

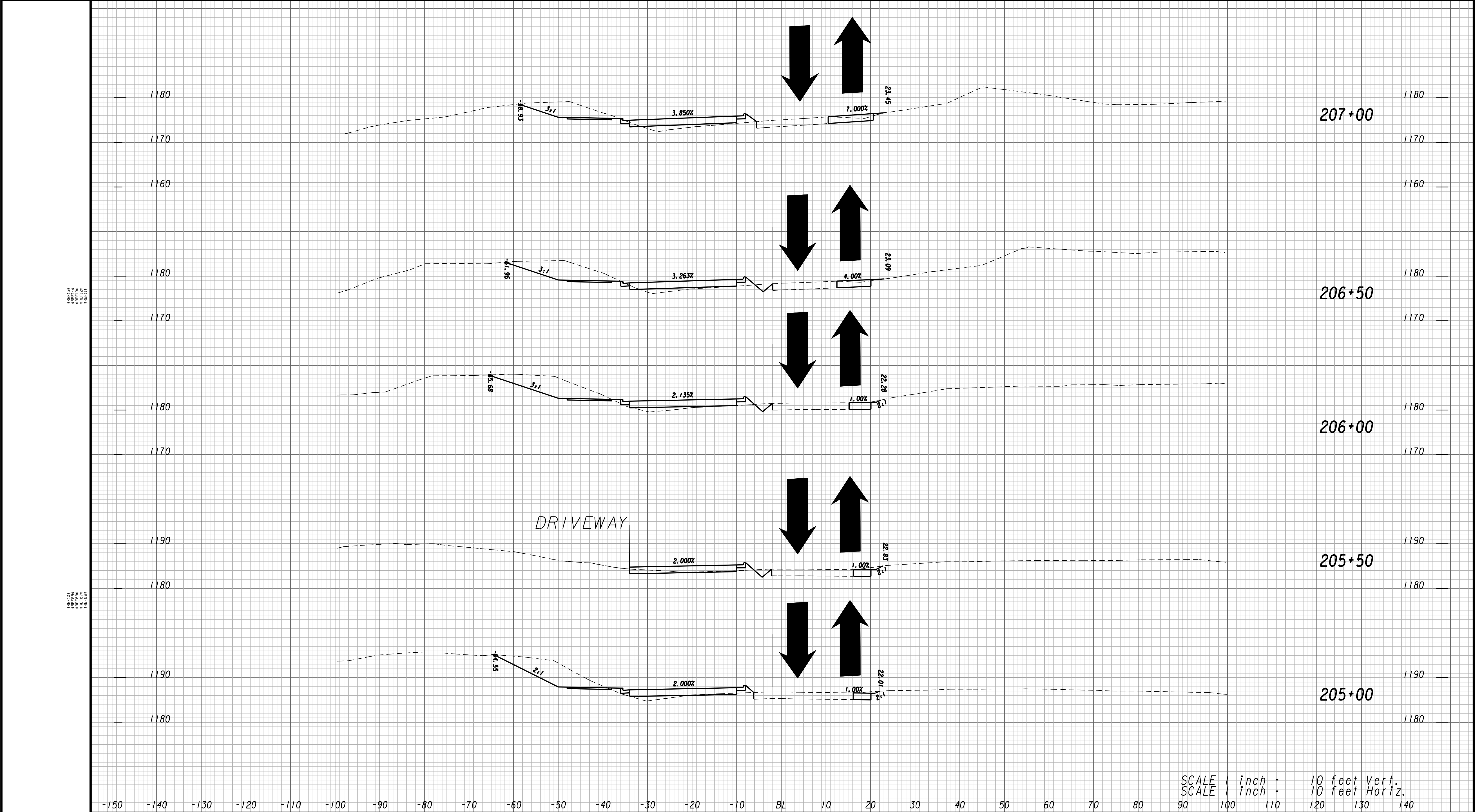
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FORSYTH COUNTY

DRAWING No.
19-23



GRESHAM
SMITH AND
PARTNERS

SUXSEW
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SCALE 1 inch = 10 feet Vert.
SCALE 1 inch = 10 feet Horiz.



GRESHAM
SMITH AND
PARTNERS

REVISION DATES

FORSYTH COUNTY
ENGINEERING DEPARTMENT

STAGING CROSS SECTIONS
STAGE I

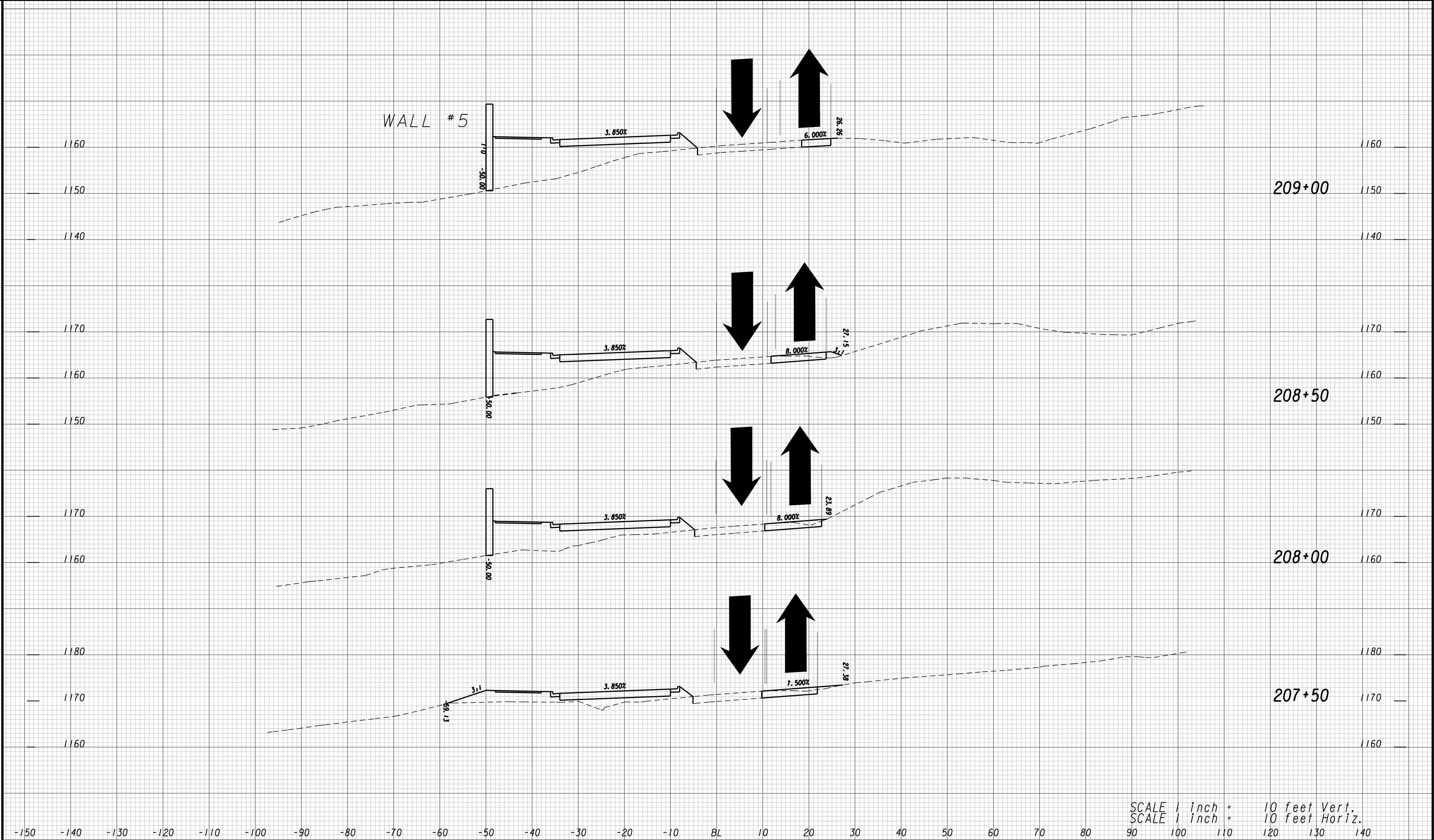
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FORSYTH COUNTY

DRAWING No.
19-24

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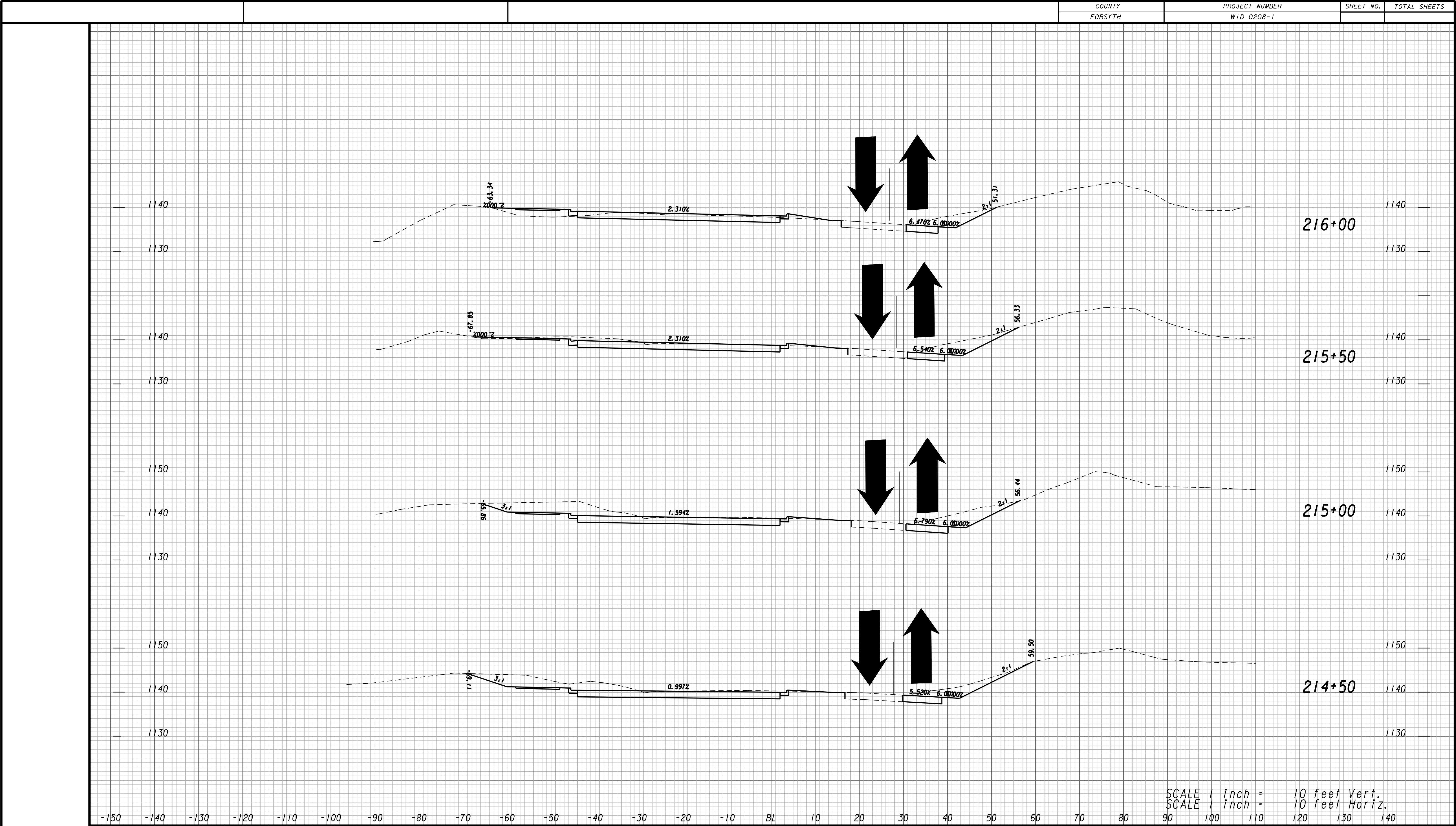
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GRESHAM
SMITH AND
PARTNERS

REVISION DATES			FORSYTH COUNTY ENGINEERING DEPARTMENT	
			STAGING CROSS SECTIONS STAGE 1	
			WID 0208-1 (PHASE 5) FORSYTH COUNTY	
			DRAWING No. 19-25	





GRESHAM
SMITH AND
PARTNERS

REVISION DATES

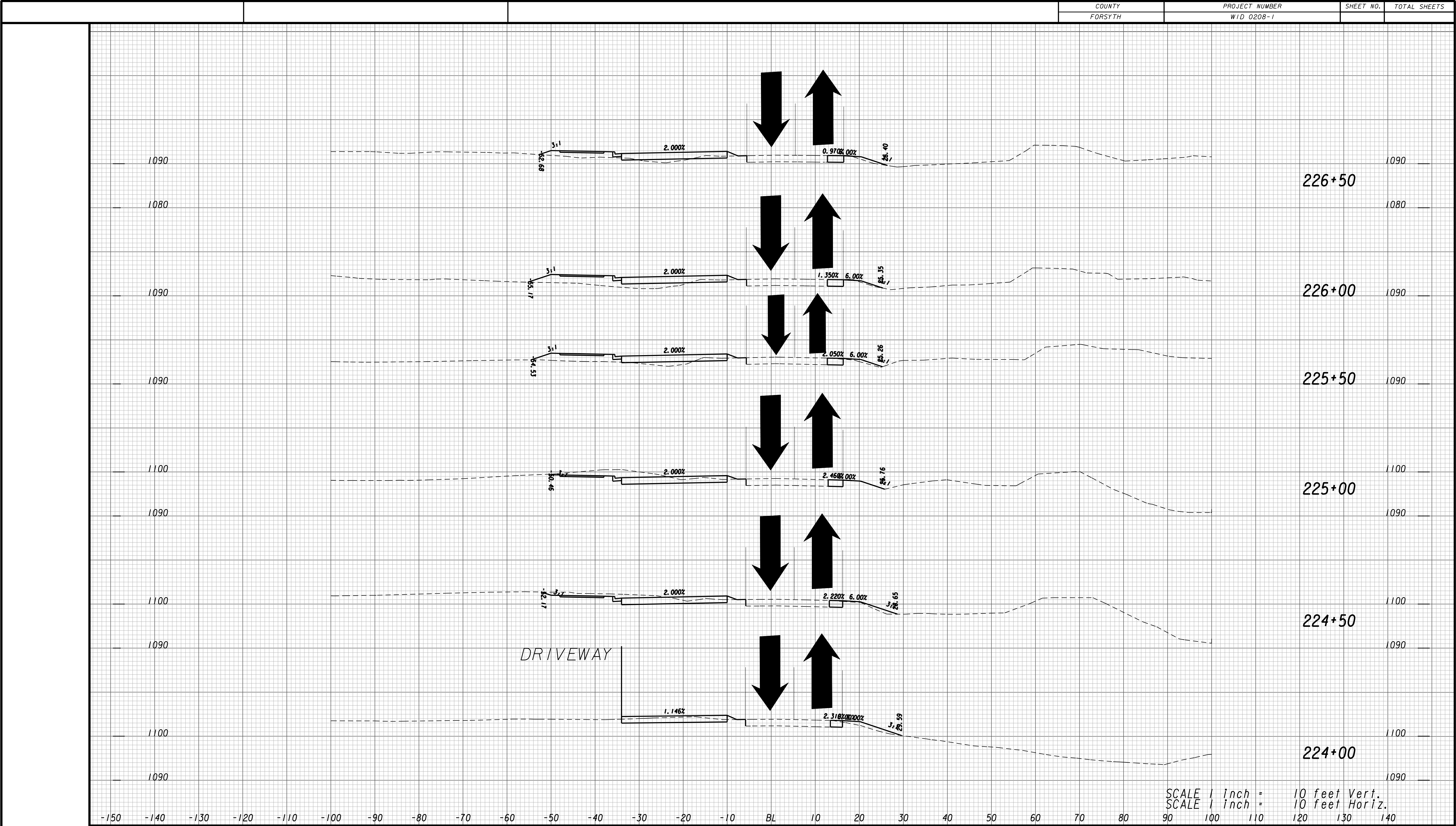
FORSYTH COUNTY
ENGINEERING DEPARTMENT

**STAGING CROSS SECTIONS
STAGE 1**

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
19-28





SCALE 1 inch = 10 feet Vert.
SCALE 1 inch = 10 feet Horiz.

REVISION DATES

FORSYTH COUNTY
ENGINEERING DEPARTMENT

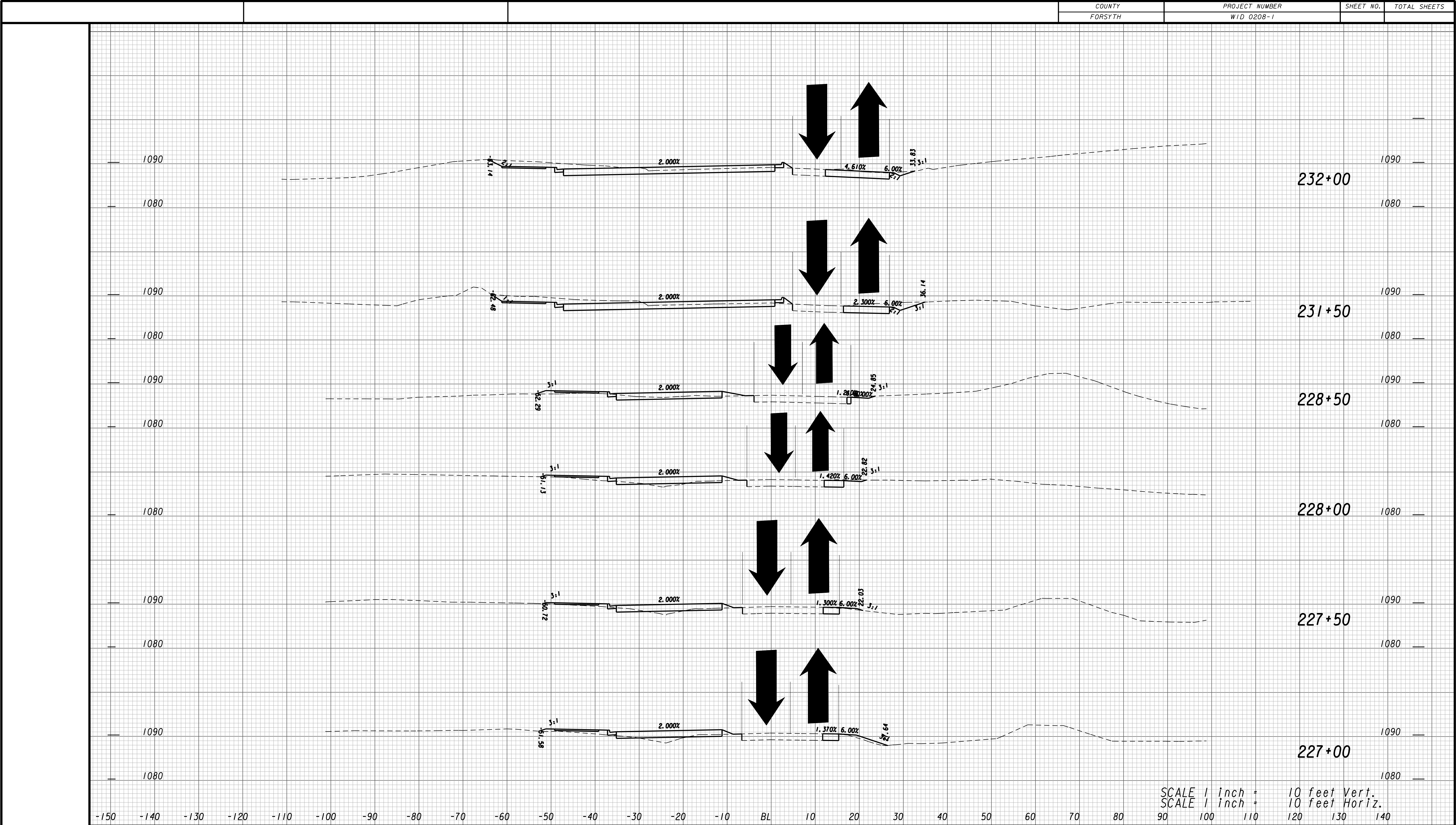
STAGING CROSS SECTIONS
STAGE I

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
19-30



GRESHAM
SMITH AND
PARTNERS



SCALE 1 inch = 10 feet Vert.
SCALE 1 inch = 10 feet Horiz.

REVISION DATES

FORSYTH COUNTY
ENGINEERING DEPARTMENT
OFFICE: ROAD DESIGN

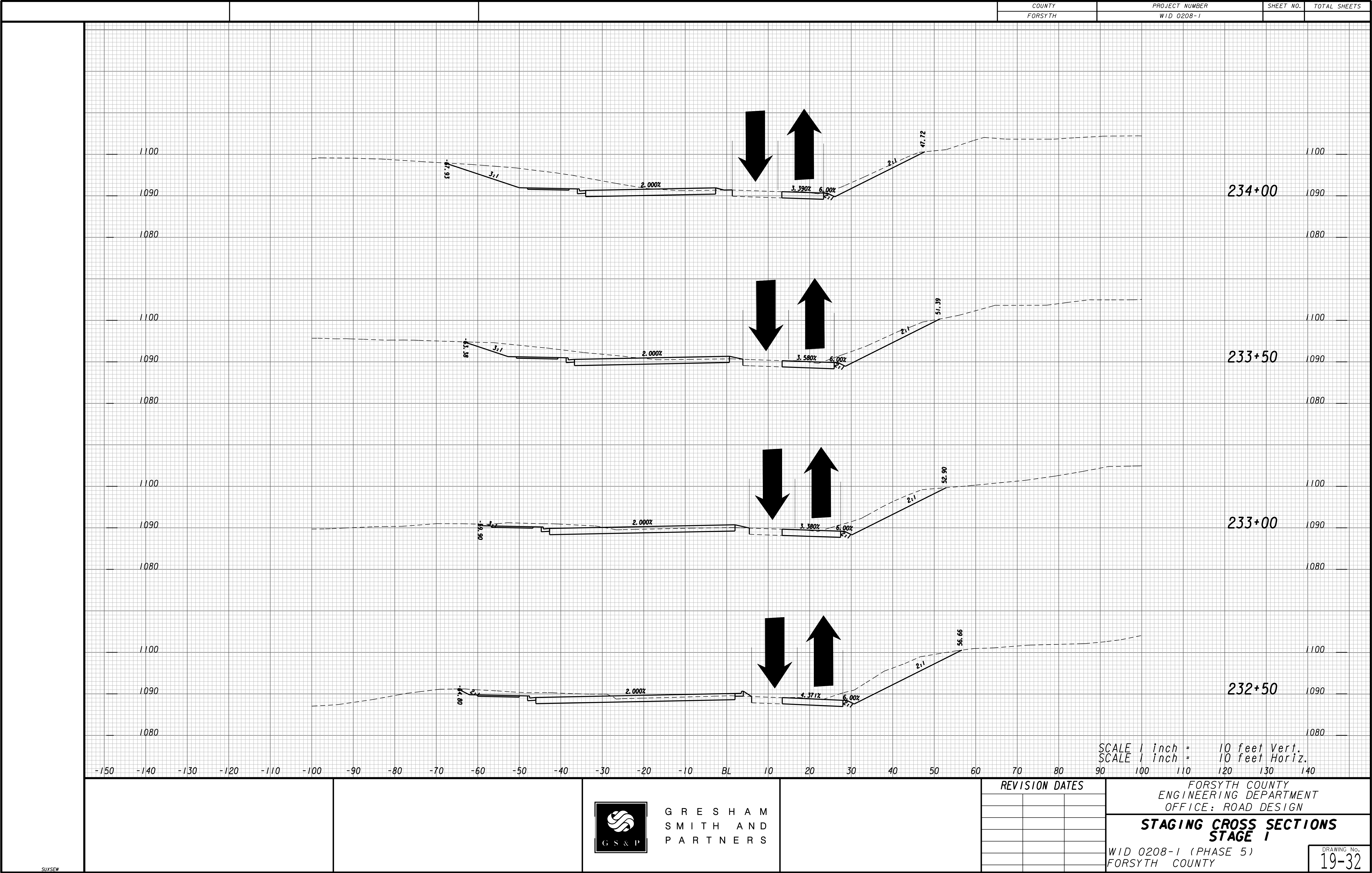
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STAGE 1**

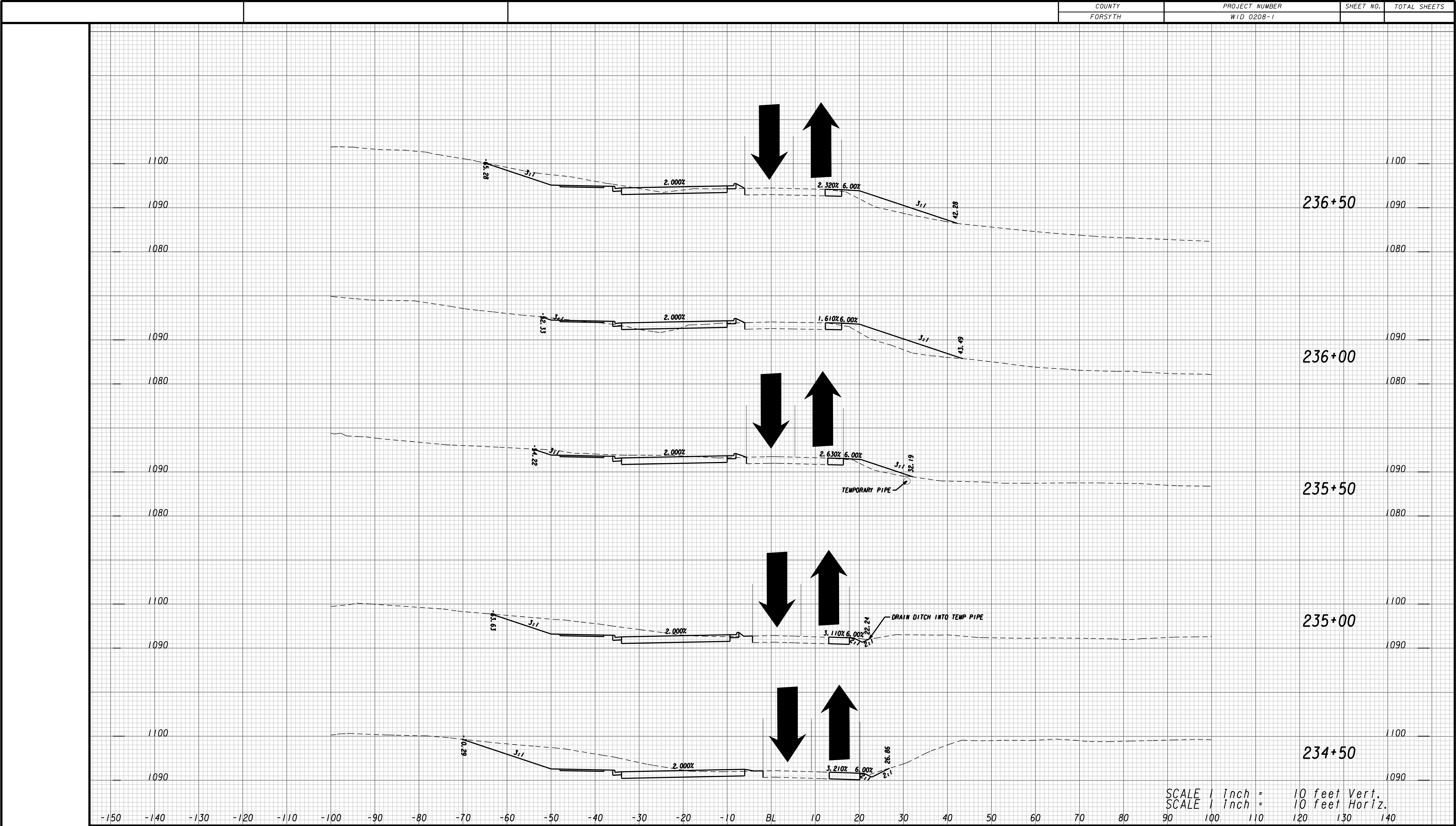
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FORSYTH COUNTY

DRAWING No.
19-31



G R E S H A M
S M I T H A N D
P A R T N E R S





SCALE 1 inch = 10 feet Vert.
SCALE 1 inch = 10 feet Horiz.

REVISION DATES

FORSYTH COUNTY
ENGINEERING DEPARTMENT
OFFICE: ROAD DESIGN

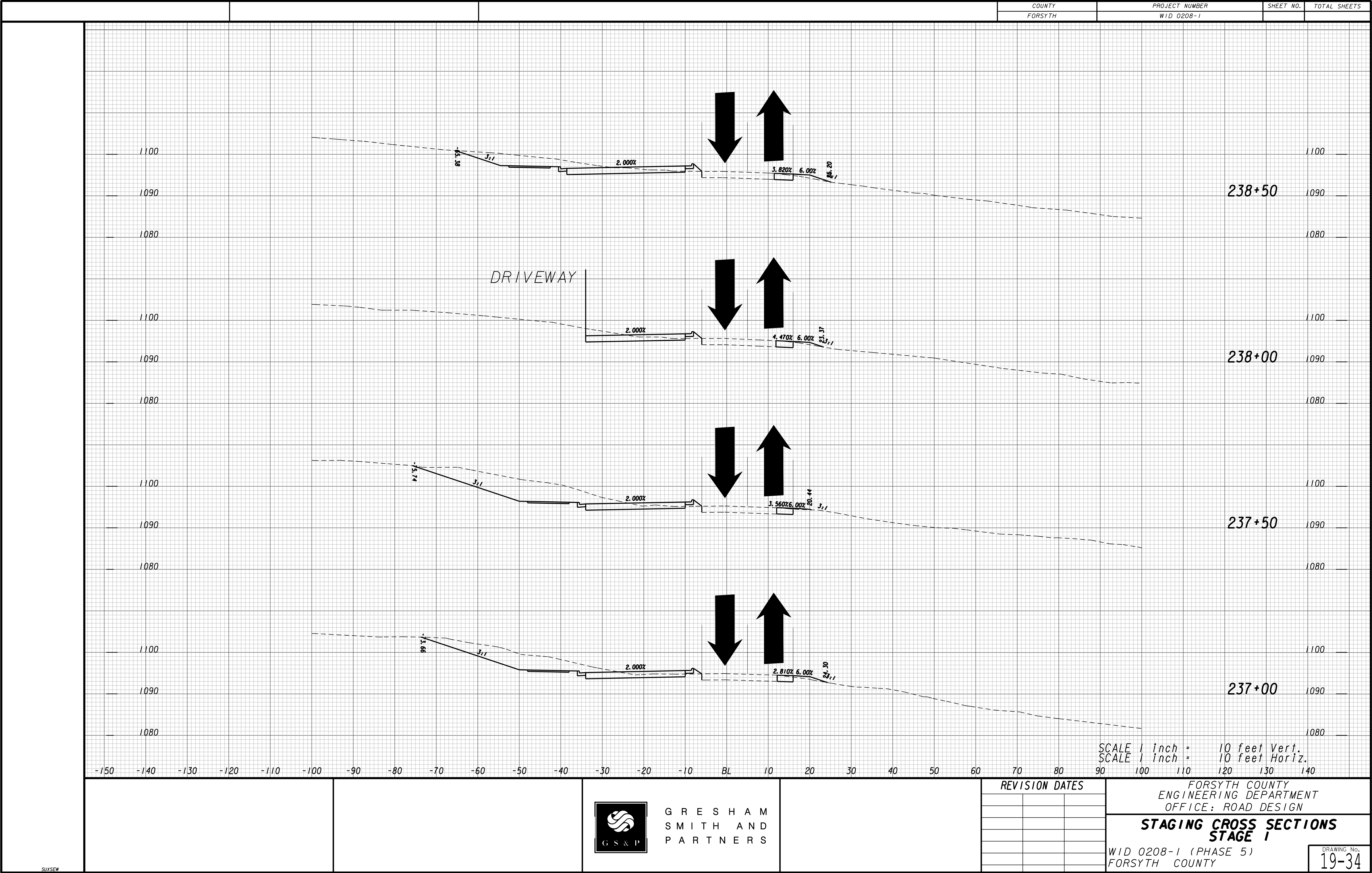
**STAGING CROSS SECTIONS
STAGE I**

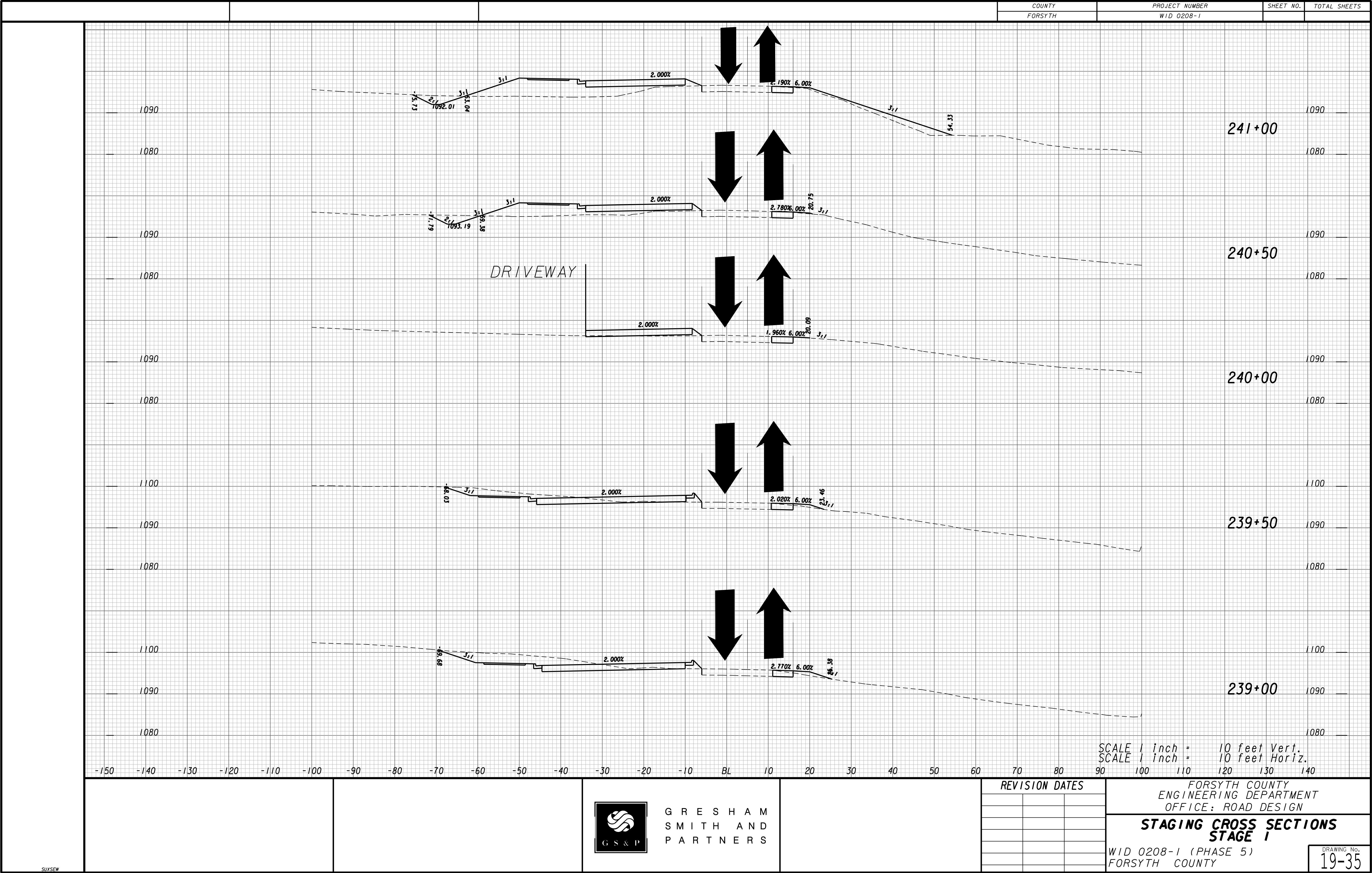
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FORSYTH COUNTY

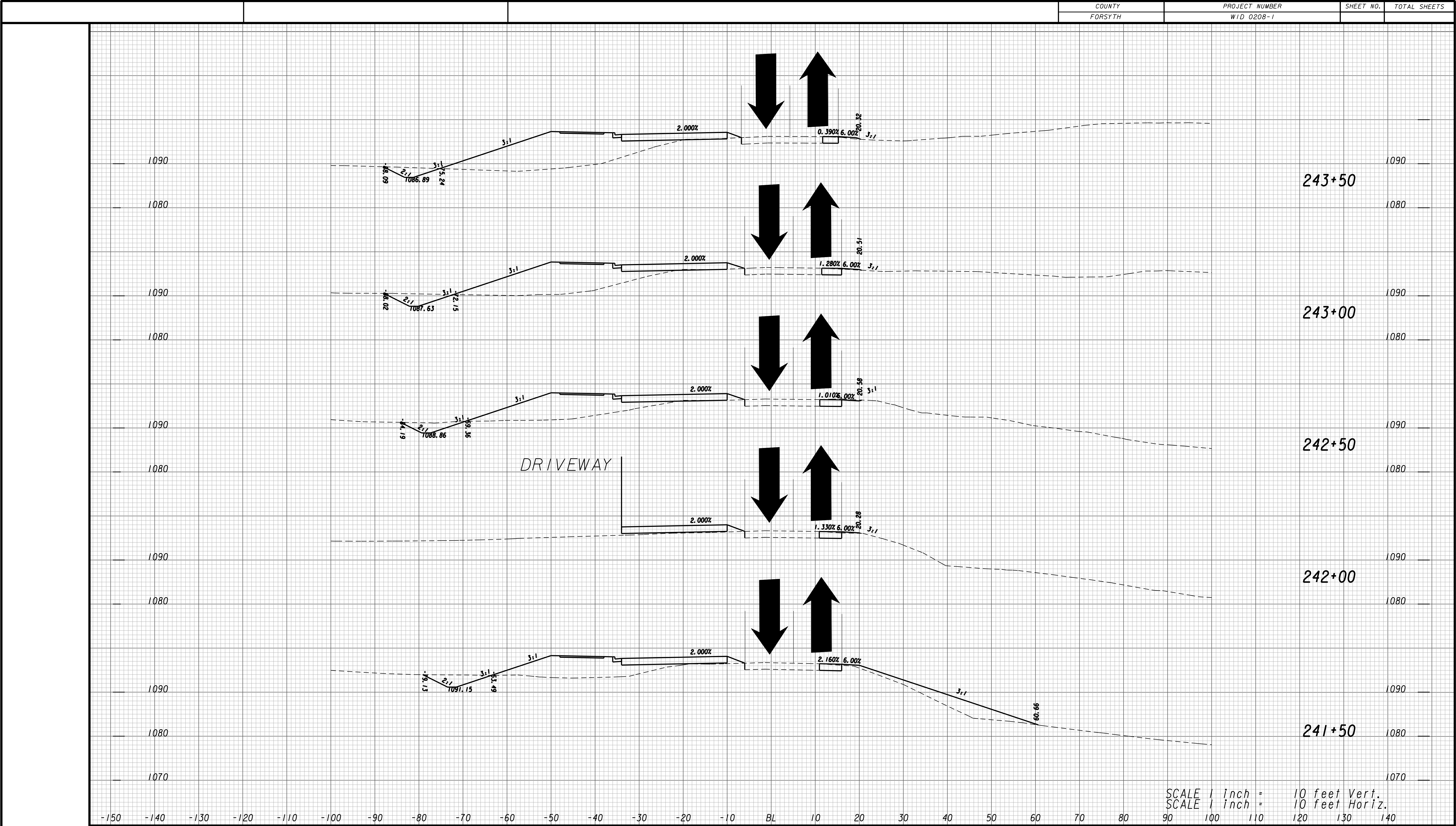
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19-33



GRESHAM
SMITH AND
PARTNERS







G R E S H A M
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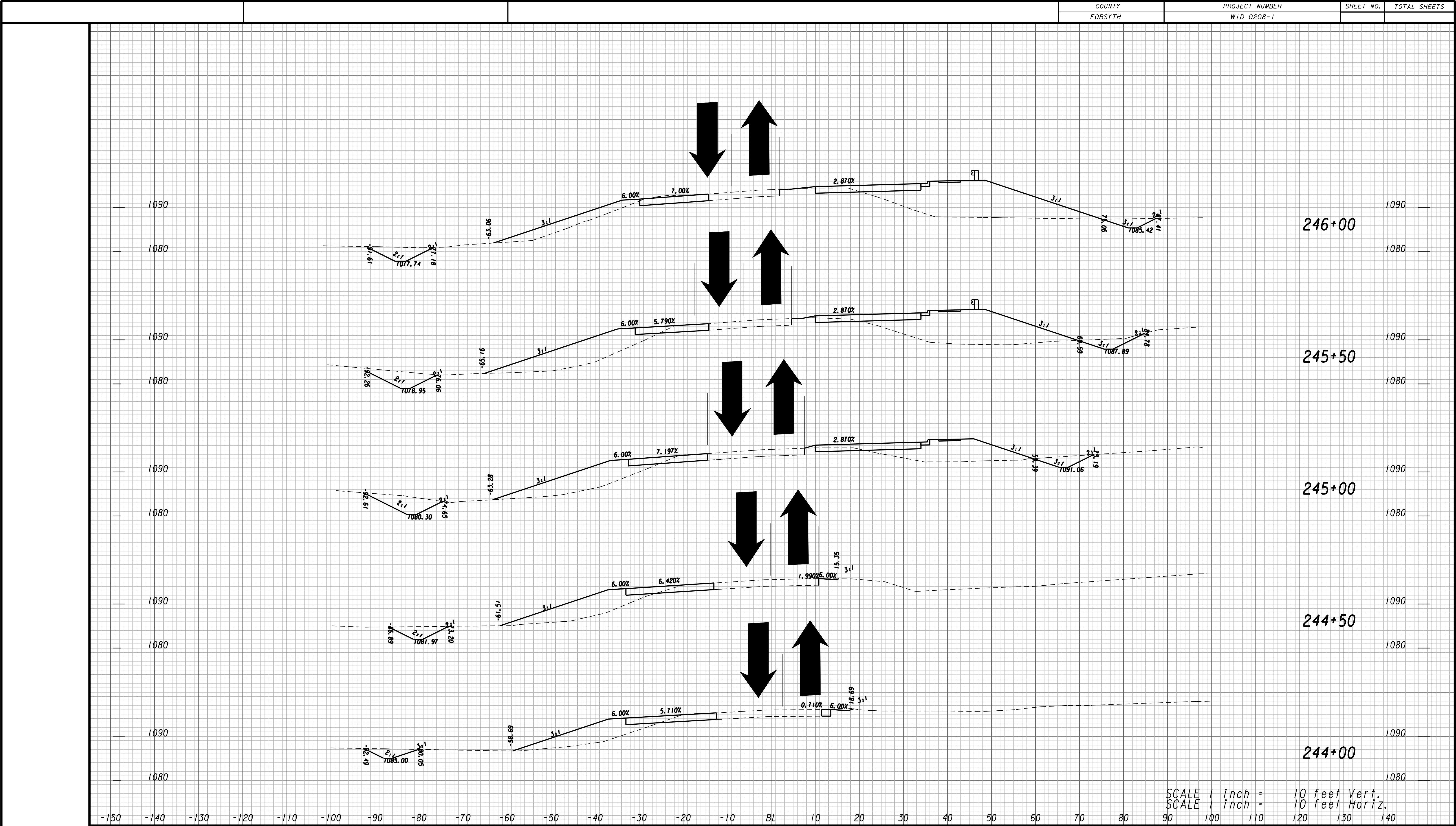
REVISION DATES

FORSYTH COUNTY
ENGINEERING DEPARTMENT
OFFICE: ROAD DESIGN

**STAGING CROSS SECTIONS
STAGE 1**

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
19-36



SCALE 1 inch = 10 feet Vert.
SCALE 1 inch = 10 feet Horiz.

REVISION DATES

FORSYTH COUNTY
ENGINEERING DEPARTMENT
OFFICE: ROAD DESIGN

STAGING CROSS SECTIONS
STAGE I

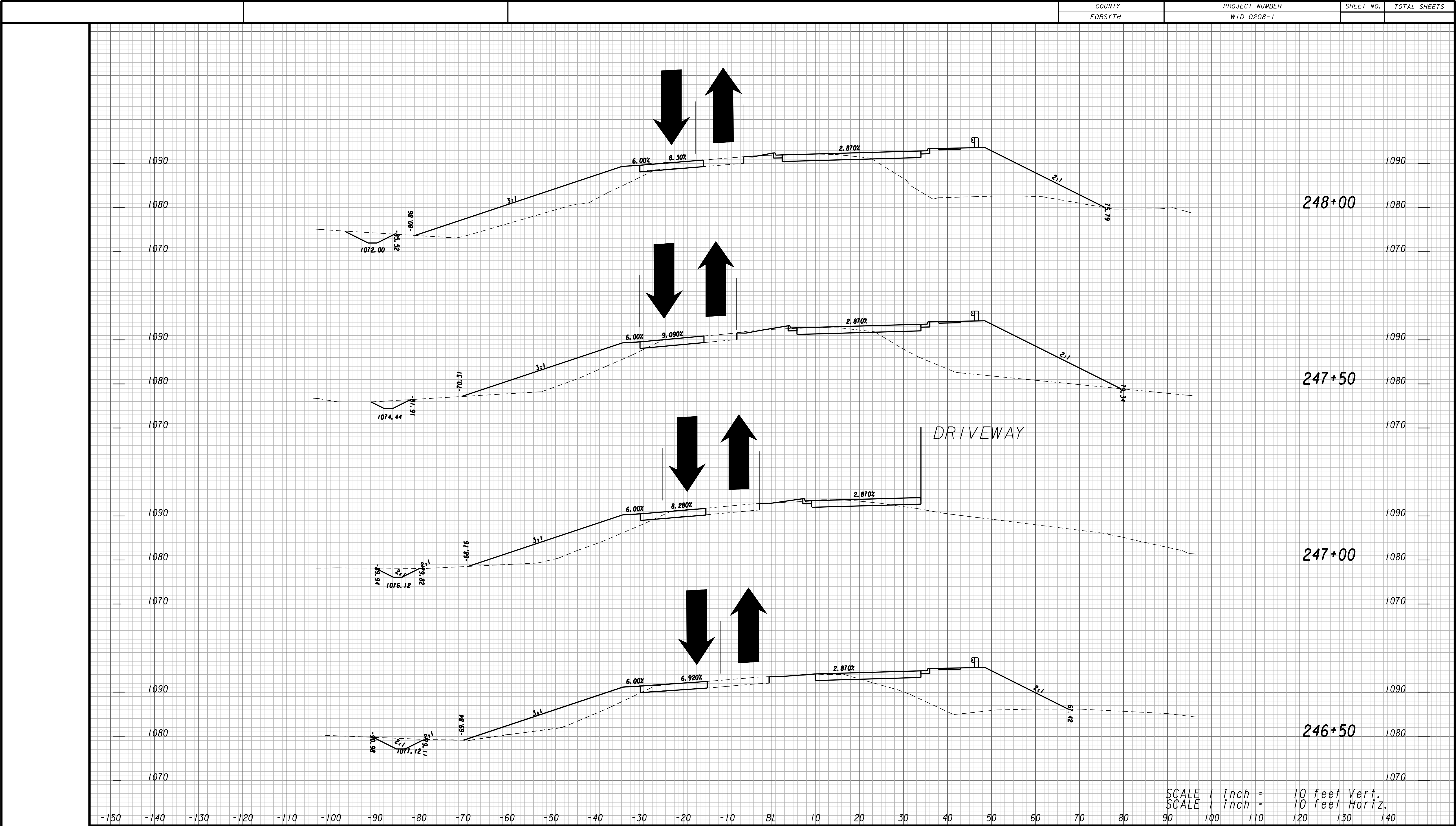
WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.

19-37



G R E S H A M
S M I T H A N D
P A R T N E R S



G R E S H A M
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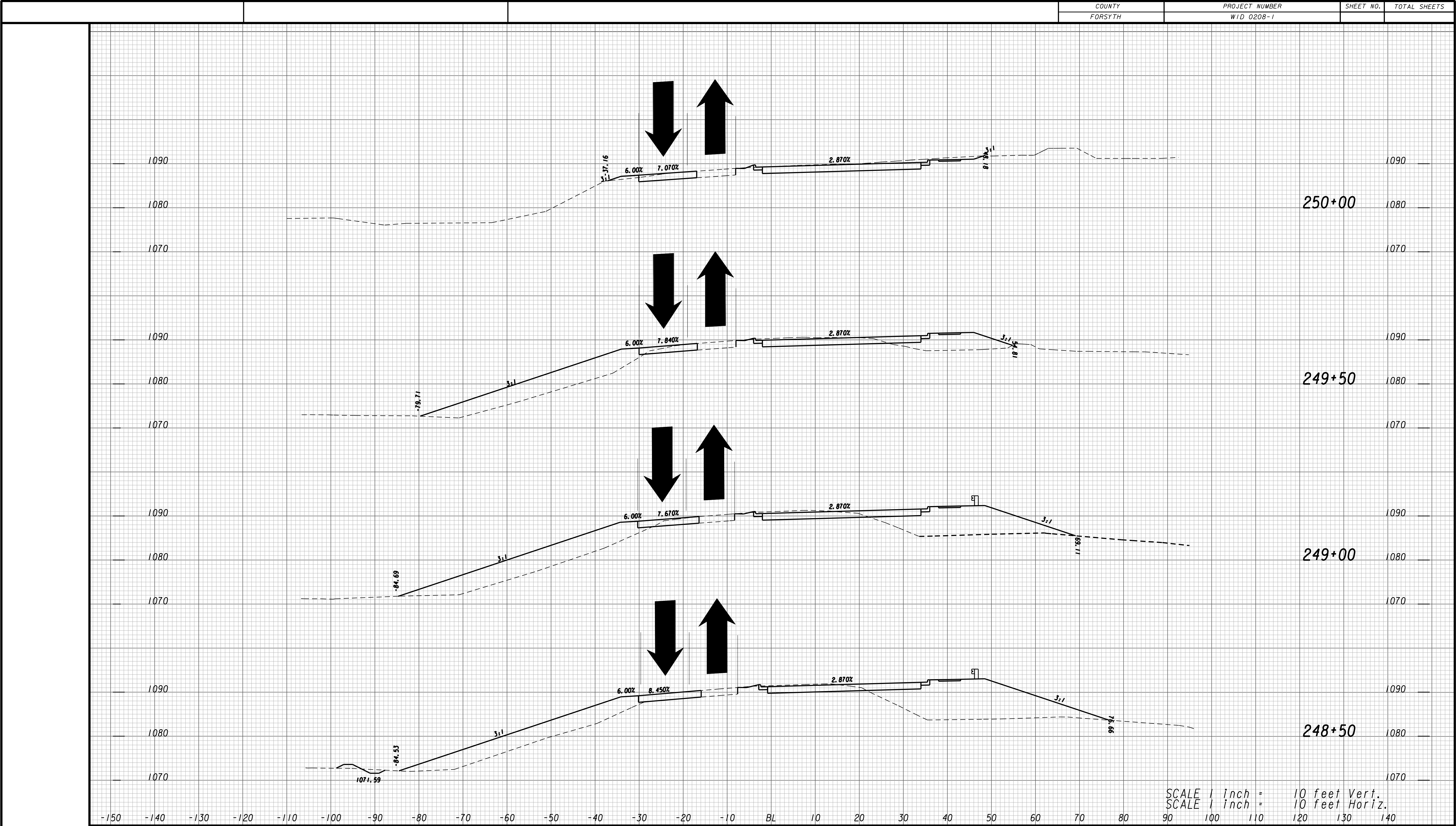
REVISION DATES

FORSYTH COUNTY
ENGINEERING DEPARTMENT
OFFICE: ROAD DESIGN

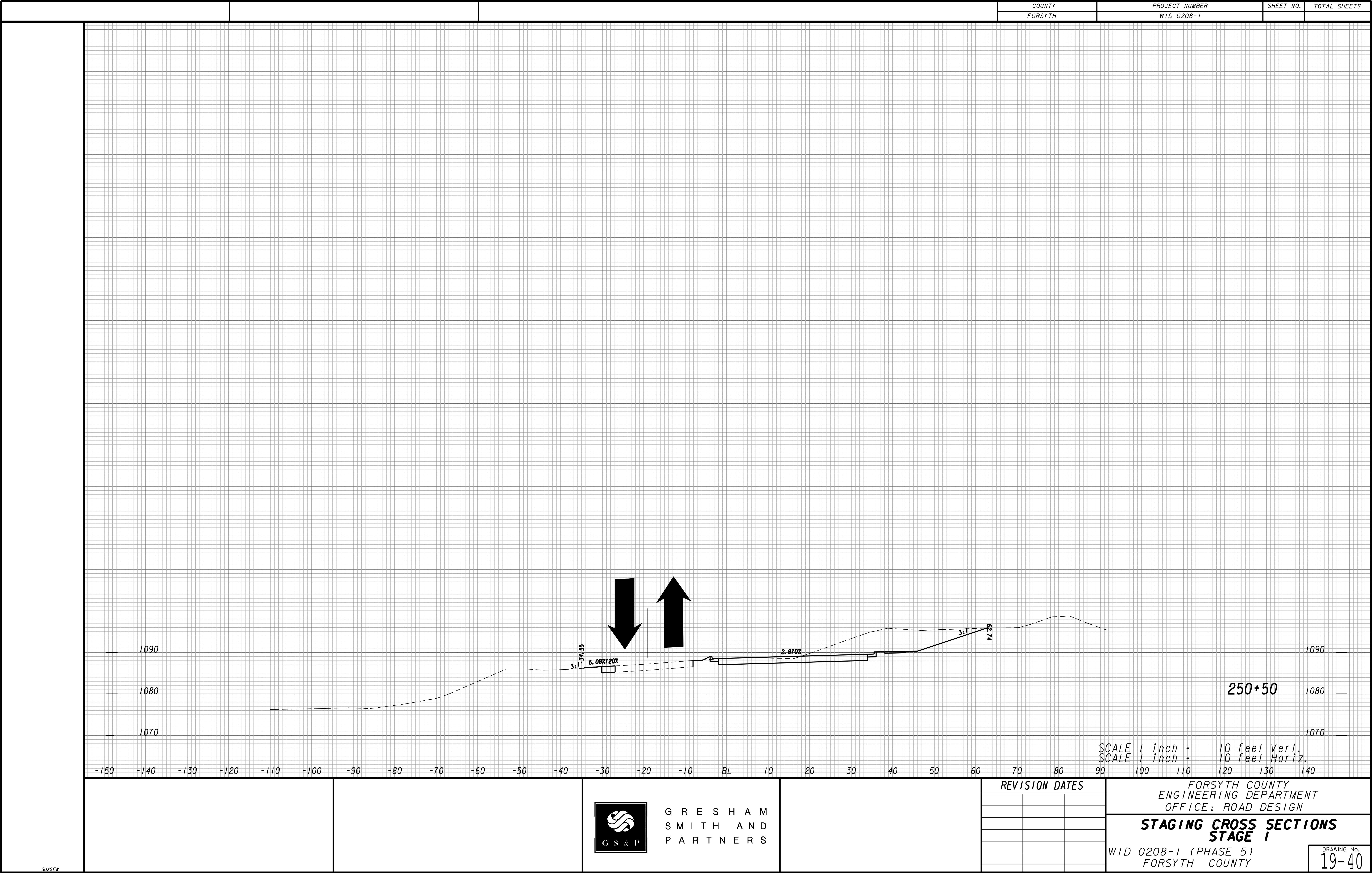
**STAGING CROSS SECTIONS
STAGE 1**

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

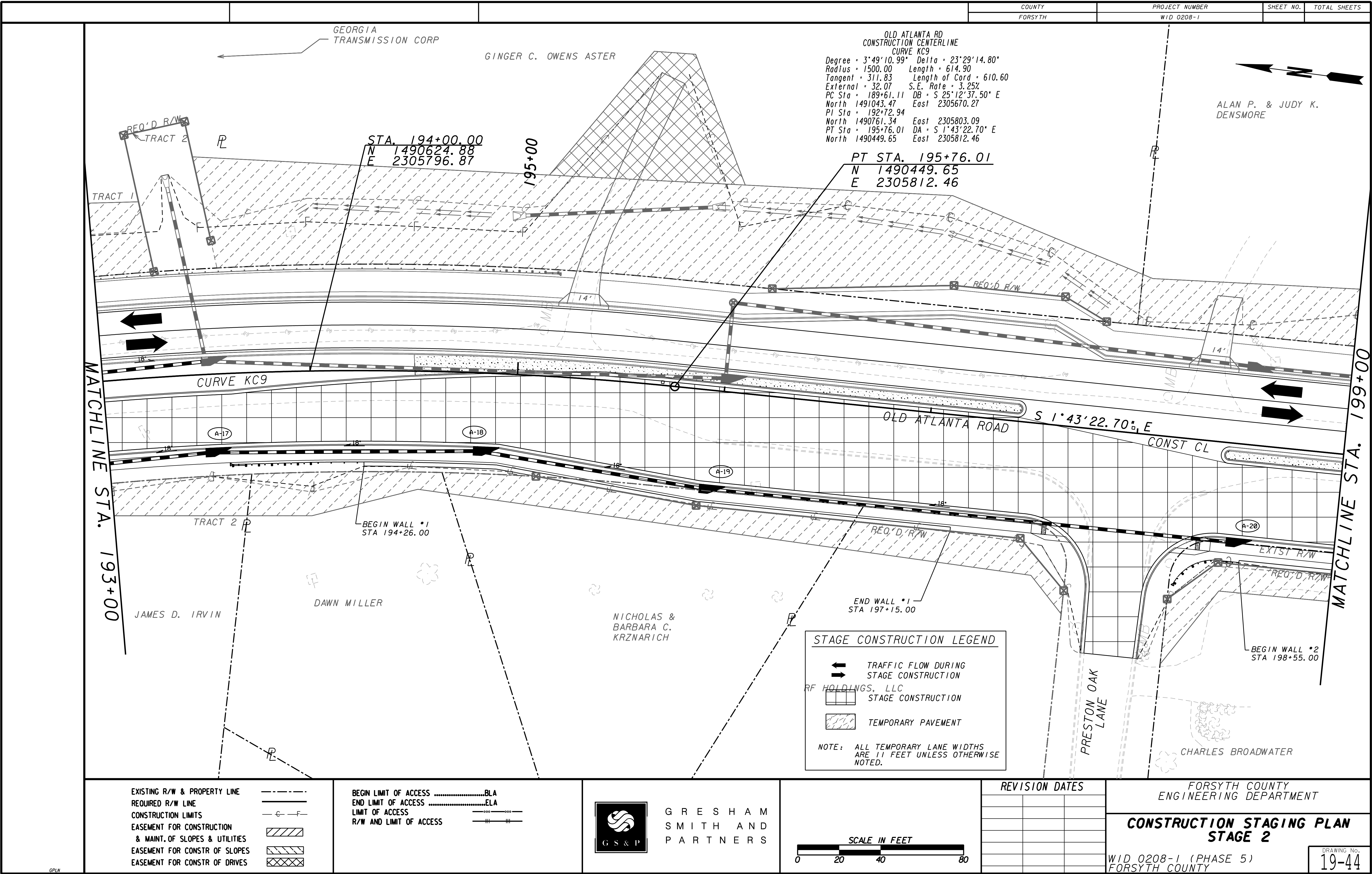
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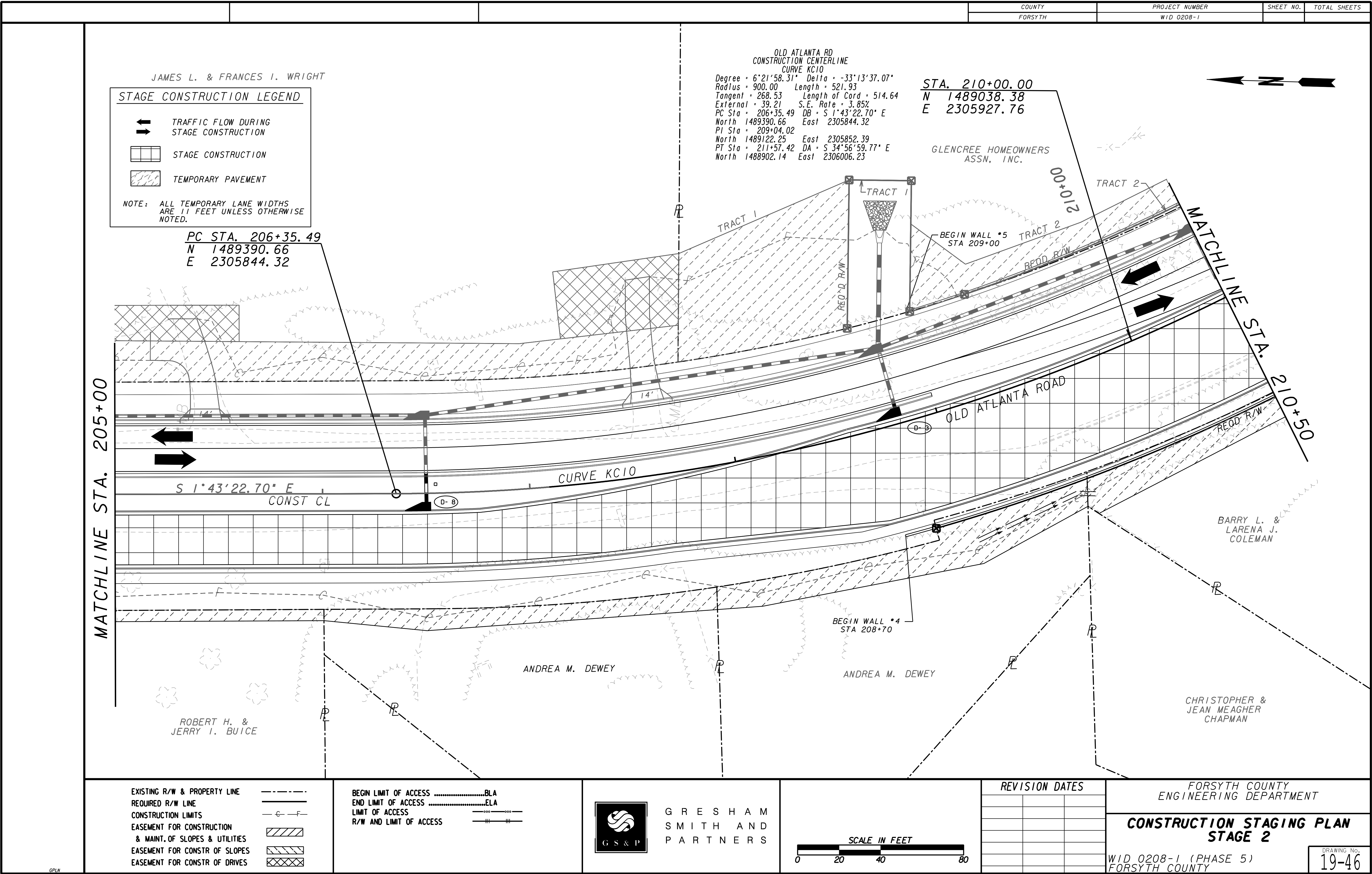


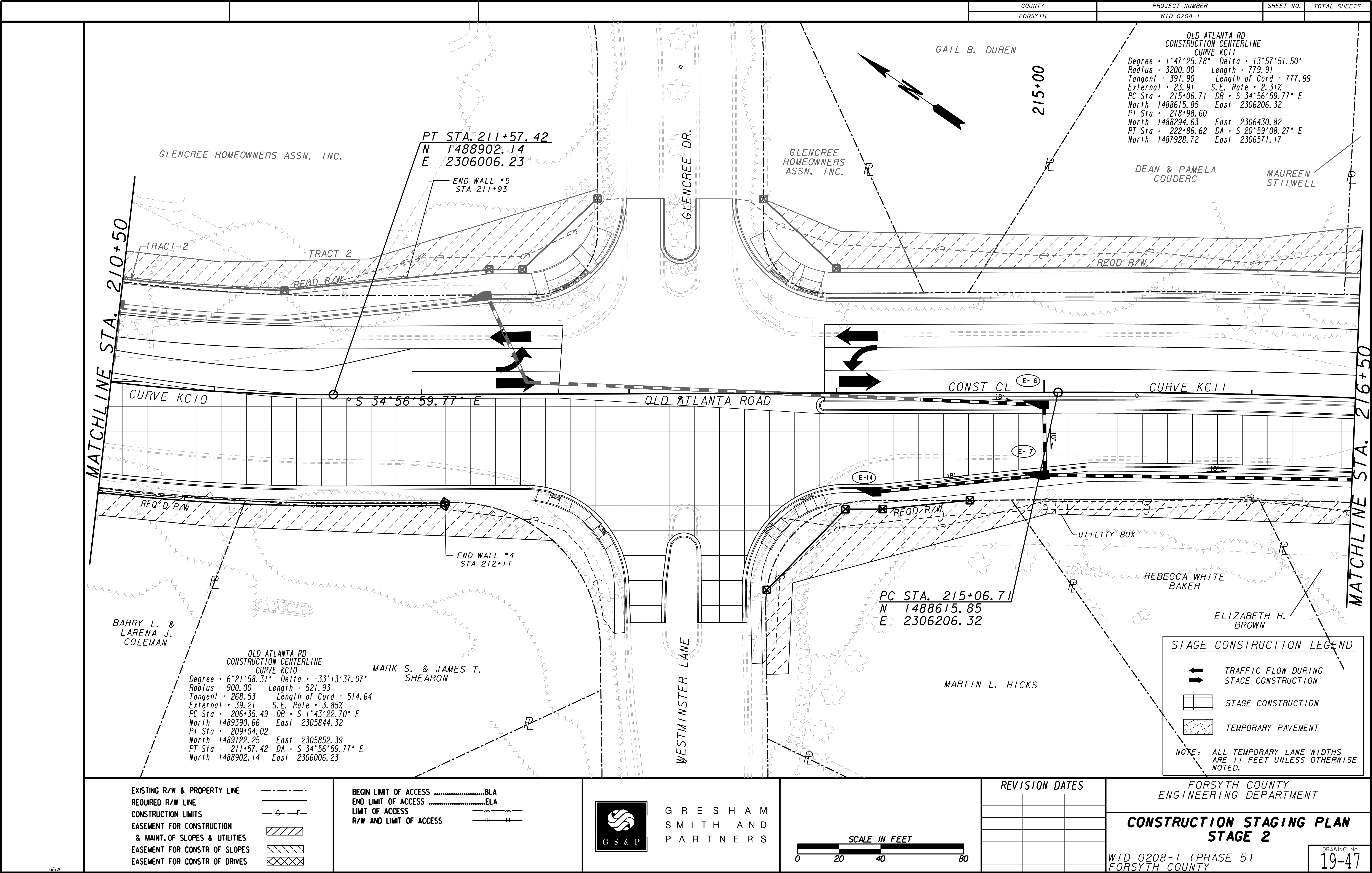
 GRESHAM SMITH AND PARTNERS		REVISION DATES			FORSYTH COUNTY ENGINEERING DEPARTMENT OFFICE: ROAD DESIGN STAGING CROSS SECTIONS STAGE I WID 0208-1 (PHASE 5) FORSYTH COUNTY	DRAWING No. 19-39

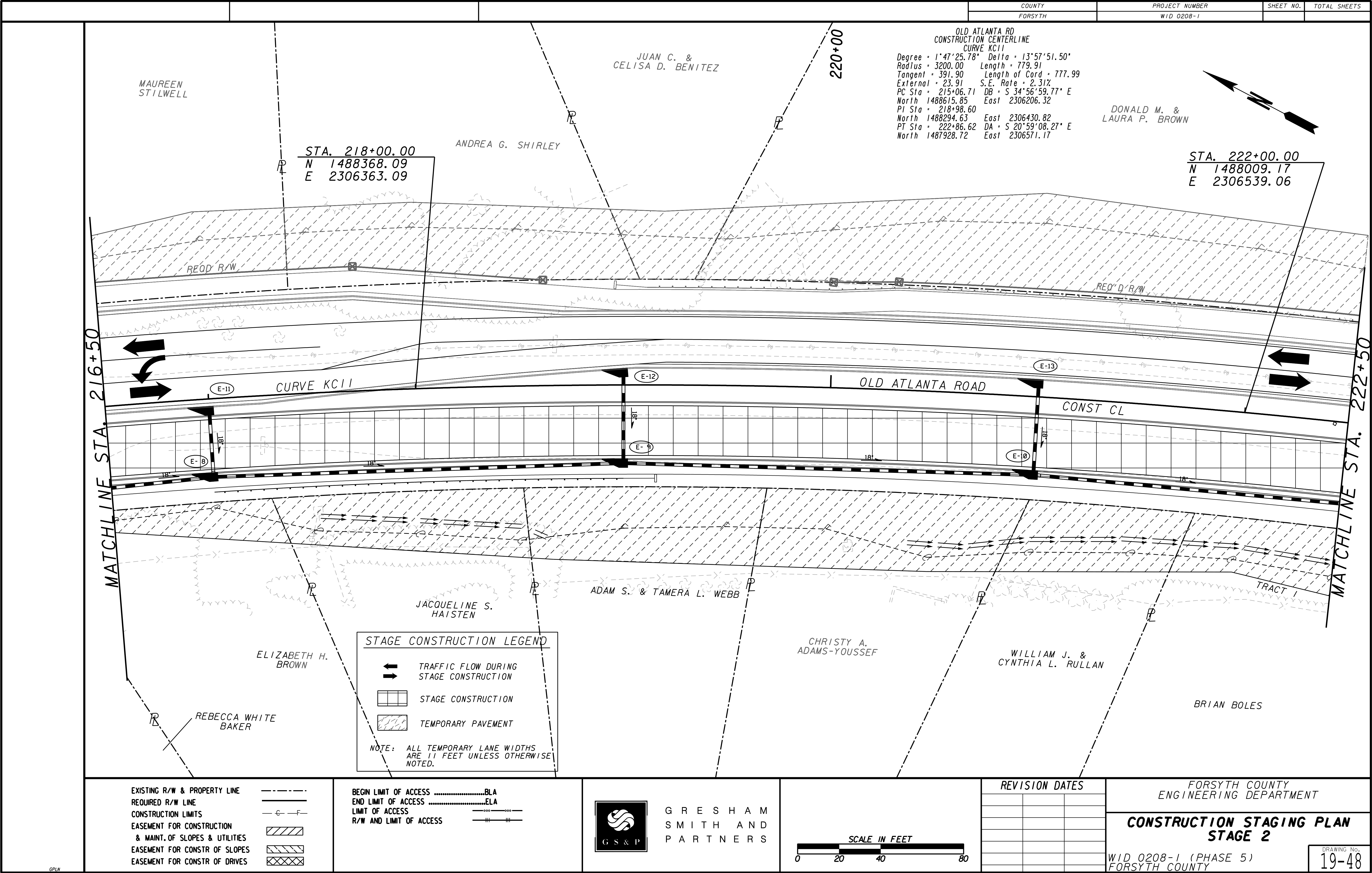


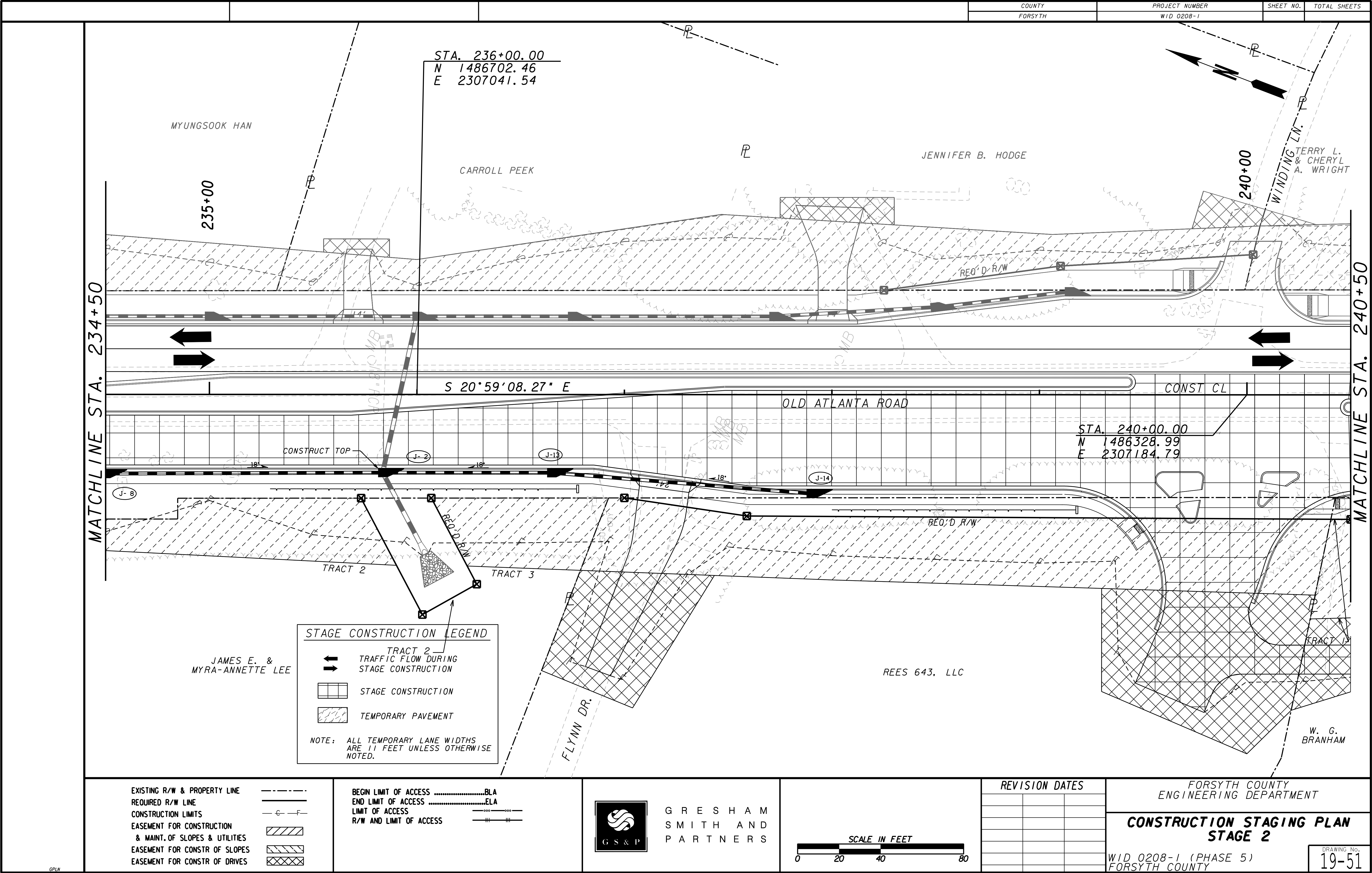
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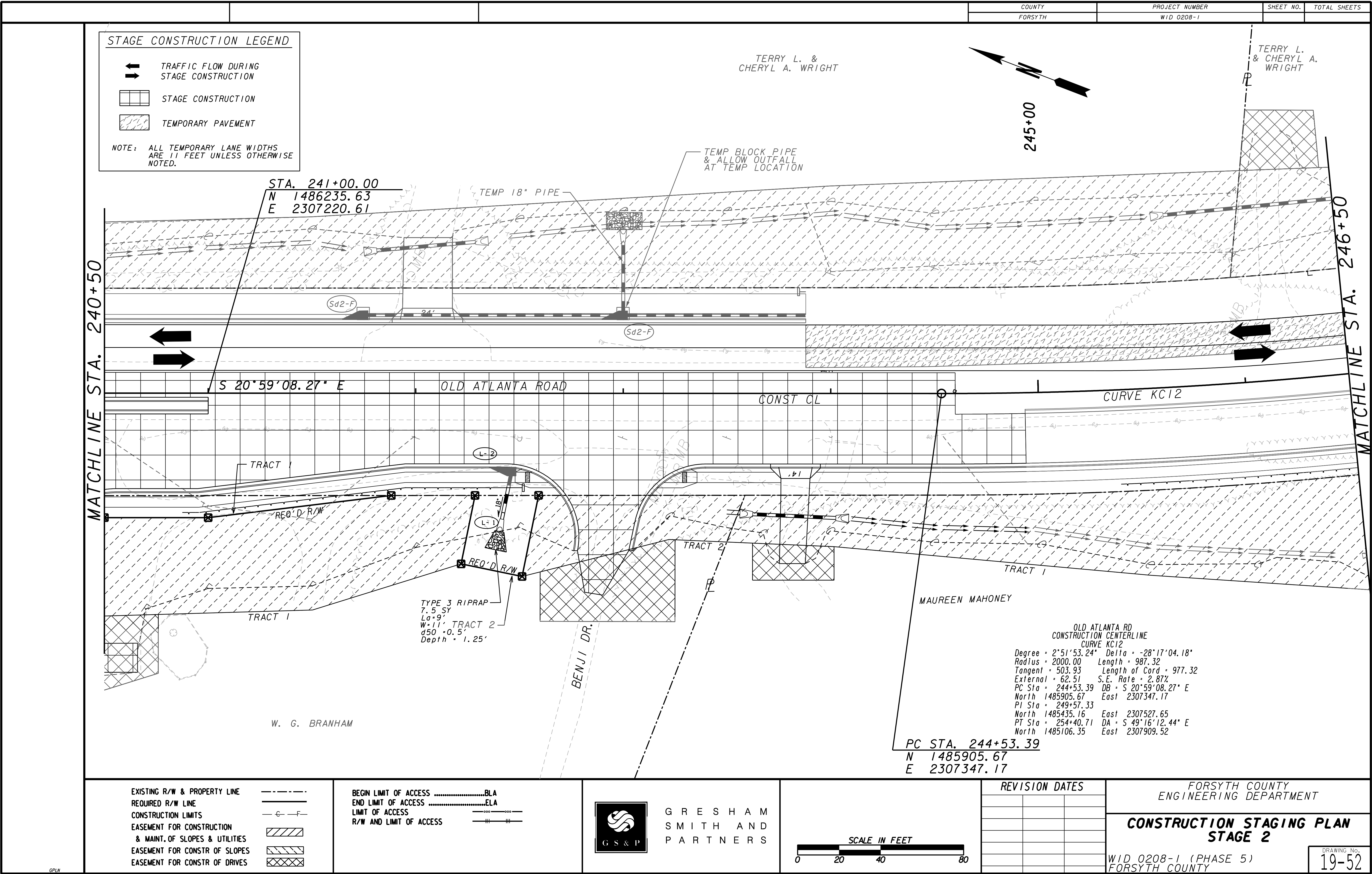


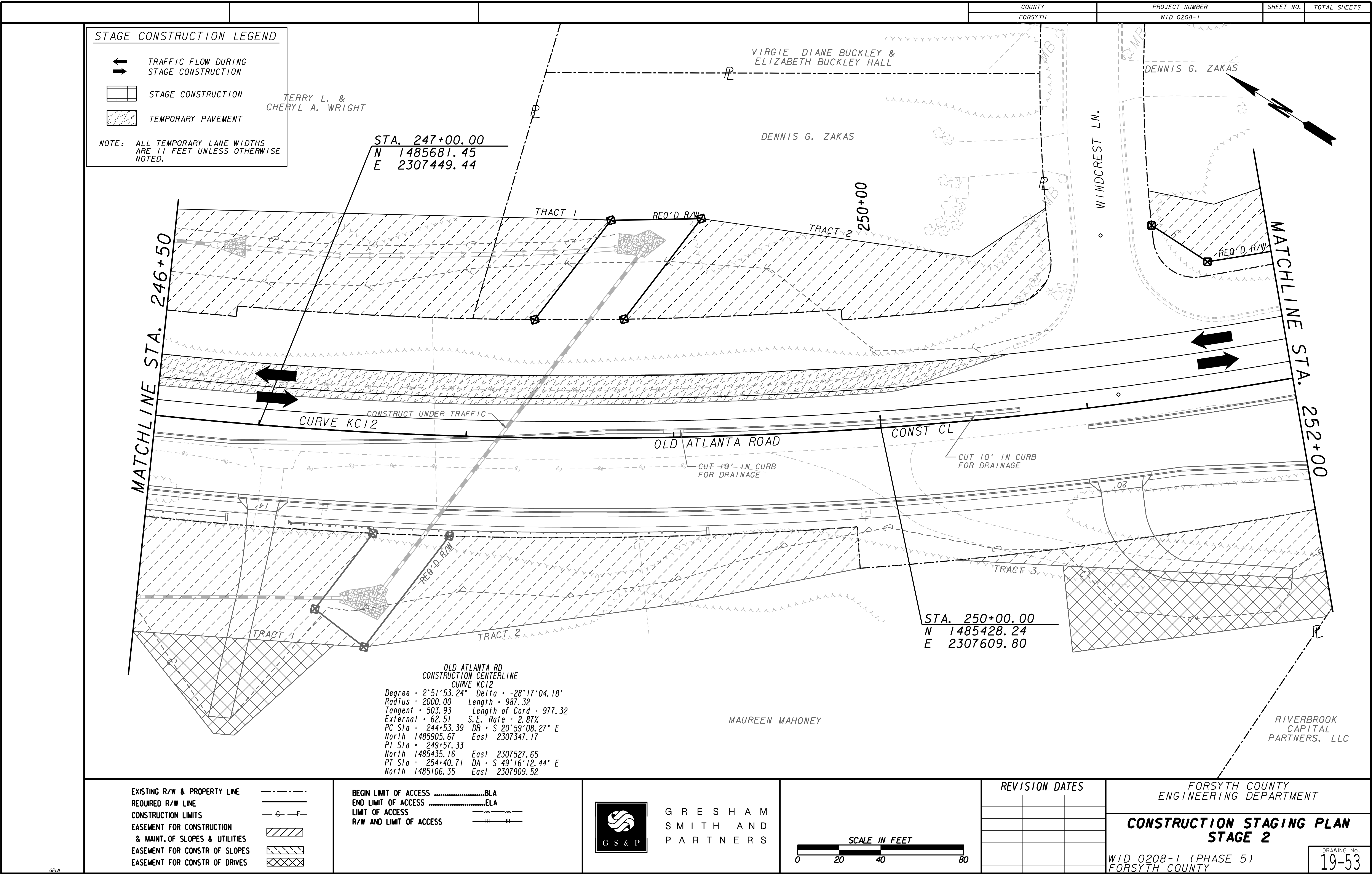


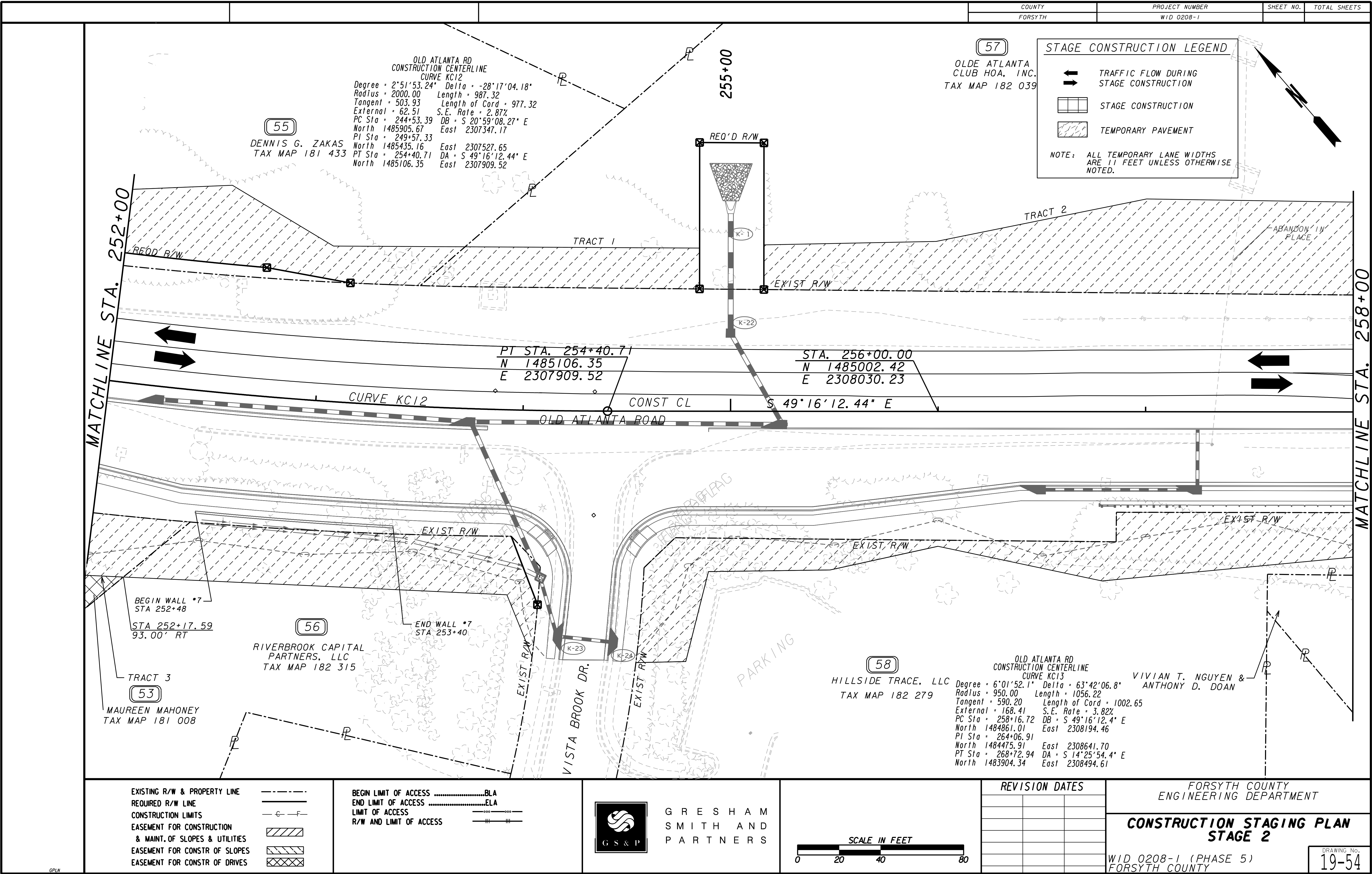








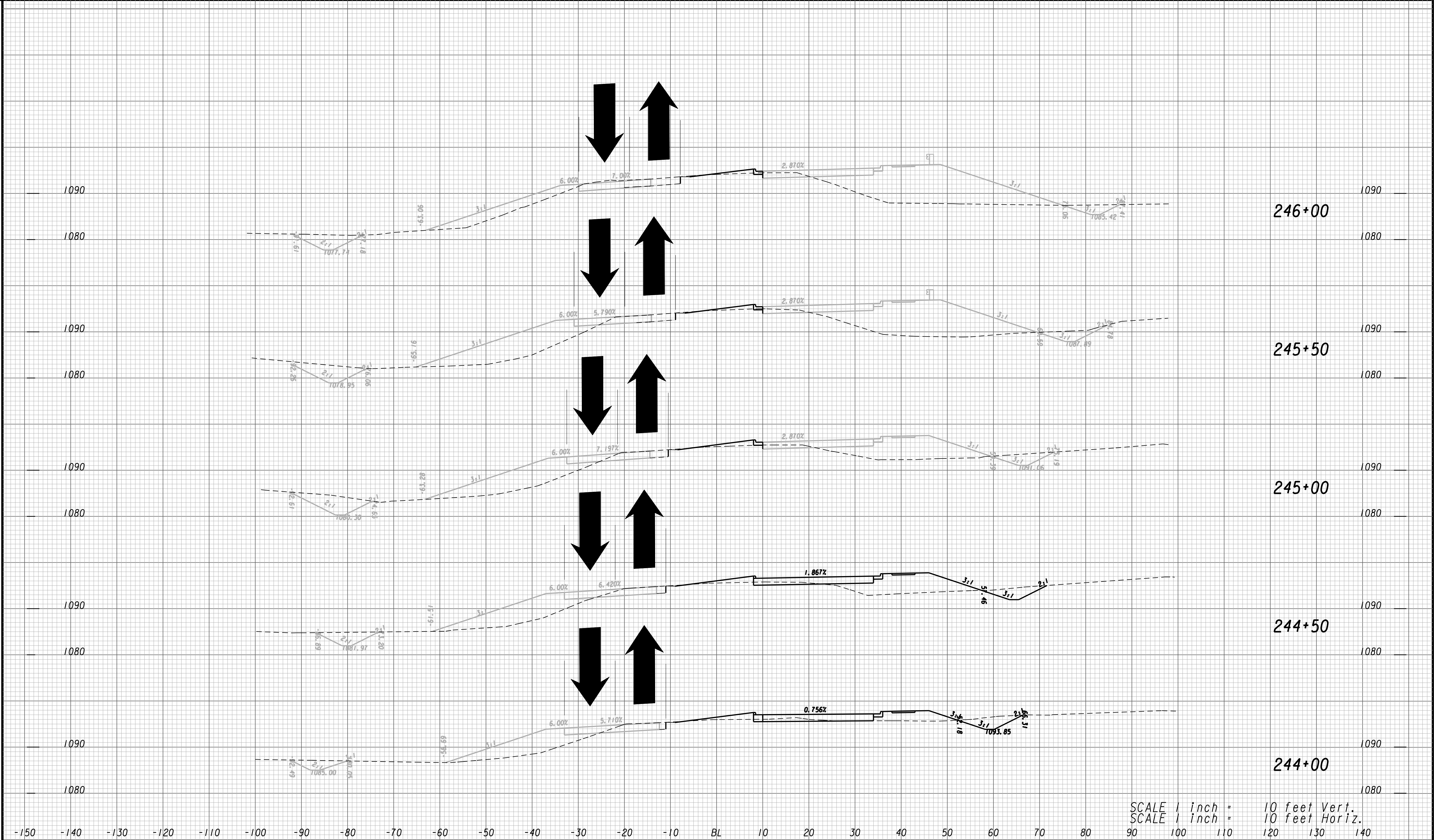




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SCALE 1 inch = 10 feet Vert.
SCALE 1 inch = 10 feet Horiz.



GRESHAM
SMITH AND
PARTNERS

REVISION DATES

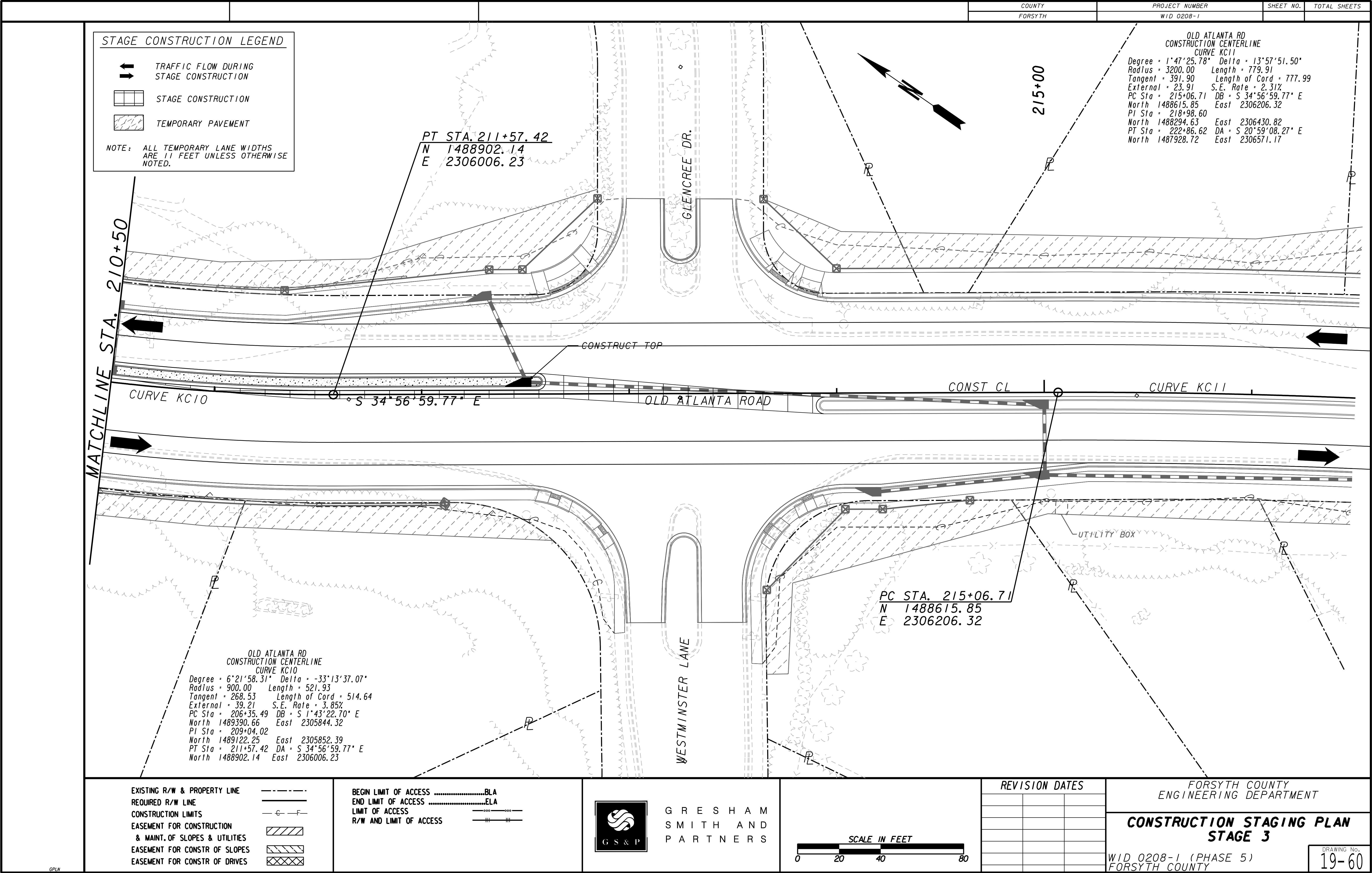
FORSYTH COUNTY
ENGINEERING DEPARTMENT

STAGING CROSS SECTIONS
STAGE 2

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
19-56

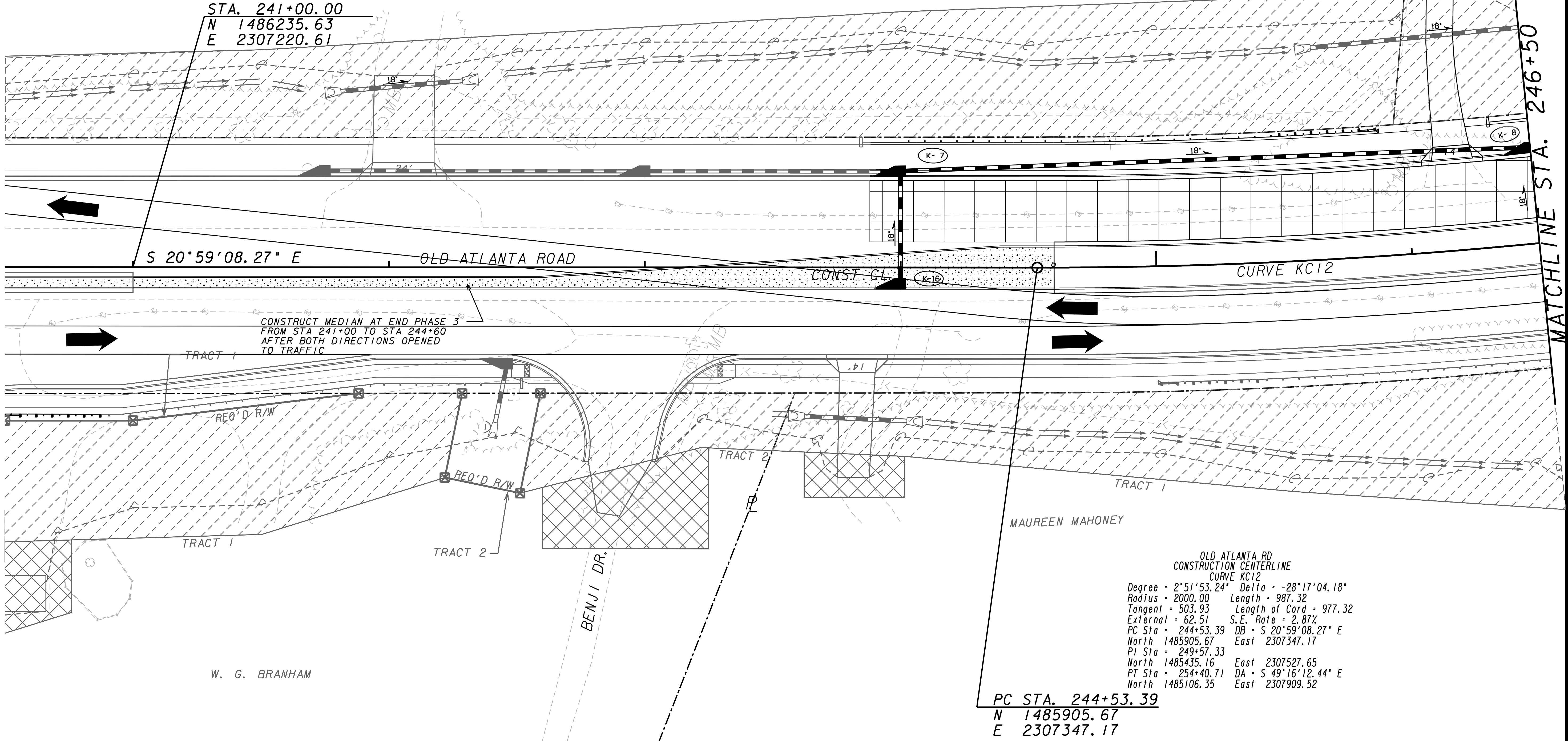
DRAWING NO.
19-59



STAGE CONSTRUCTION LEGEND

- TRAFFIC FLOW DURING STAGE CONSTRUCTION
- STAGE CONSTRUCTION
- TEMPORARY PAVEMENT

NOTE: ALL TEMPORARY LANE WIDTHS ARE 11 FEET UNLESS OTHERWISE NOTED.

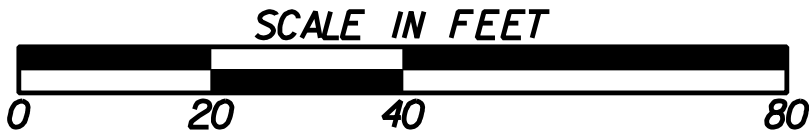


- EXISTING R/W & PROPERTY LINE
- REQUIRED R/W LINE
- CONSTRUCTION LIMITS
- EASEMENT FOR CONSTRUCTION & MAINT. OF SLOPES & UTILITIES
- EASEMENT FOR CONSTR OF SLOPES
- EASEMENT FOR CONSTR OF DRIVES

- BEGIN LIMIT OF ACCESS
- END LIMIT OF ACCESS
- LIMIT OF ACCESS
- R/W AND LIMIT OF ACCESS



GRESHAM
SMITH AND
PARTNERS



REVISION DATES

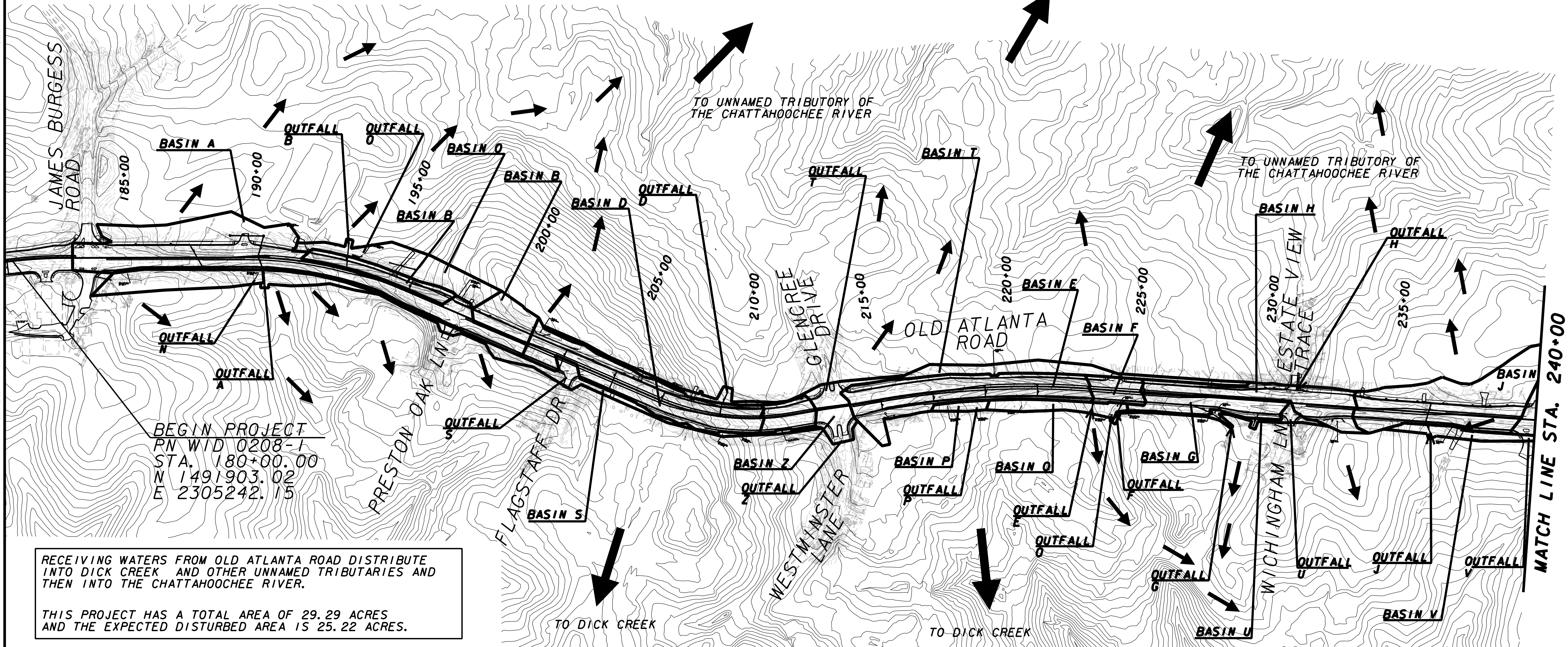
FORSYTH COUNTY
ENGINEERING DEPARTMENT

CONSTRUCTION STAGING PLAN
STAGE 3

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
19-61

OUTFALL SYSTEM	STATION	OFFSET	STRUCTURE / SIZE	DIST AREA (AC)	DRNG AREA (AC)	DESIGN				CHECK				C POST
						Q 10	Q 25	Q 50	Q 100	V 10	V 25	V 50	V 100	
A	190+38	90.5' RT	30" FES	3.79	4.50	24.20	27.55	30.25	32.93	8.36	8.63	8.84	9.02	0.76
B	190+36	97.1' LT	18" FES	1.02	1.27	7.12	8.10	8.89	9.68	6.33	6.55	6.71	6.86	0.78
D	208+84	92.2' LT	24" FES	2.41	2.41	14.78	16.74	18.27	19.74	7.49	7.71	7.85	7.97	0.87
E	223+13	73.0' RT	30" FES	2.81	3.07	17.76	20.04	21.82	23.52	7.56	7.80	7.97	8.13	0.85
F	224+06	80.1' RT	18" FES	0.46	0.46	3.15	3.65	4.08	4.53	5.16	5.37	5.53	5.69	0.91
G	228+48	107.1' RT	JUNCTION BOX	0.88	0.88	5.15	5.85	6.42	6.98	5.62	5.81	5.95	6.08	0.81
H	230+89	47.5' LT	MANHOLE	1.31	1.44	7.68	8.76	9.62	10.46	12.72	13.18	13.51	13.81	0.87
J	236+04	71.0' RT	24" FES	1.80	3.05	14.63	16.66	18.29	19.91	7.44	7.68	7.85	7.99	0.68
K	257+22	90.9' LT	30" FES	3.74	3.95	22.03	27.63	27.63	30.07	8.39	8.66	8.85	9.01	0.86
L	242+40	67.3' RT	18" FES	0.14	0.14	0.94	1.18	1.18	1.28	3.60	3.73	3.83	3.93	0.91
M	261+00	37.4' RT	CATCH BASIN	0.91	2.28	12.79	14.51	15.91	17.30	11.71	12.03	12.23	12.39	0.77
N	190+00	84.1' RT	DITCH	0.41	1.03	3.76	4.26	4.68	5.08	2.24	2.40	2.51	2.63	0.50
O	194+00	81.6' LT	DITCH	0.52	1.34	4.30	4.88	5.35	5.82	1.99	2.13	2.23	2.33	0.44
P	218+50	67.4' RT	DITCH	0.09	0.16	0.55	0.62	0.68	0.74	0.56	0.61	0.65	0.69	0.47
Q	224+00	95.1' RT	DITCH	0.30	0.51	1.68	1.90	2.08	2.27	1.32	1.36	1.41	1.44	0.45
R	248+75	94.2' LT	DITCH	1.12	6.97	22.90	25.97	28.48	30.96	2.58	2.67	2.73	2.78	0.45



GRESHAM
SMITH AND
PARTNERS

REVISION DATES

FORSYTH COUNTY
ENGINEERING DEPARTMENT

DRAINAGE AREA MAP

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
21-01

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\$USER\$

\$TIME\$
\$STBL\$

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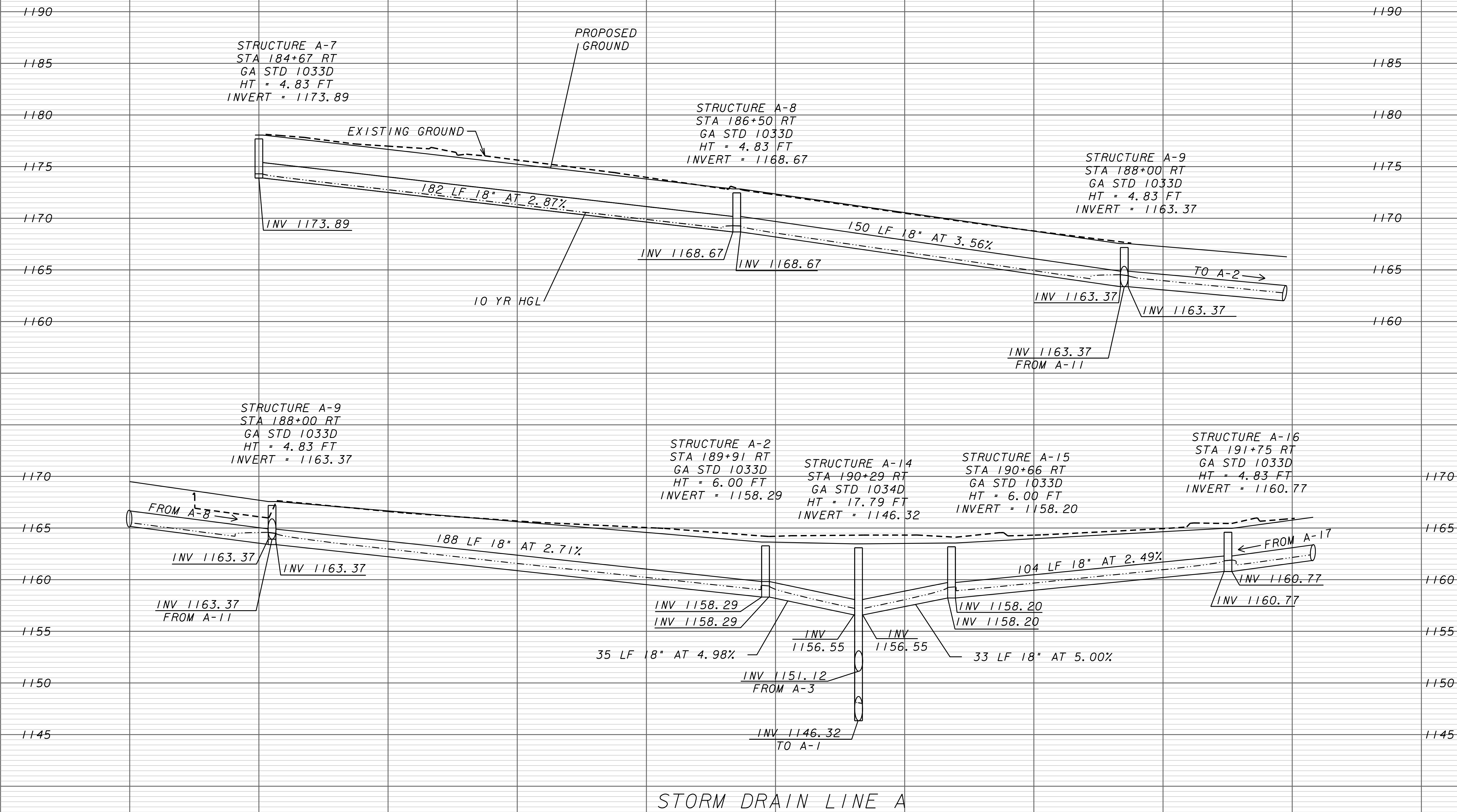
COUNTY
FORSYTH

PROJECT NUMBER
WID 0208-1

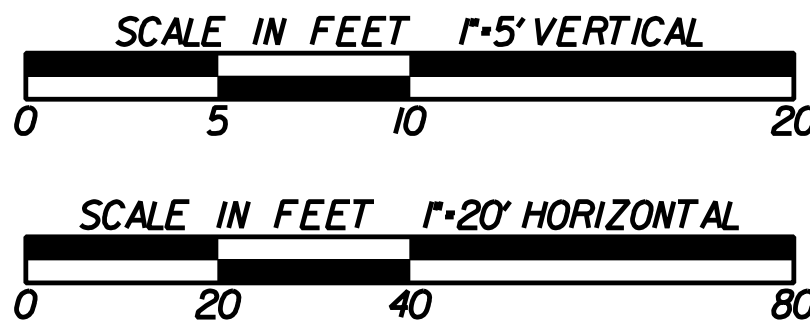
SHEET NO.
TOTAL SHEETS

OUTFALL SYSTEM	BASIN	IN LET	OUTLET	STRUCTURE / SIZE	DRNG AREA	DIST AREA	Q 50	Q 100	V 50	V 100	HW 50	HW 100	SKEW	OVERTOP ELEV
CROSS DRAIN #1	C	247+64.77' LT	248+83.92' LT	18" RCP	1.30	0.41	4.13	4.49	8.40	8.58	1078.93	1078.99	40° 06' 57.24"	1093.88

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GRESHAM
SMITH AND
PARTNERS



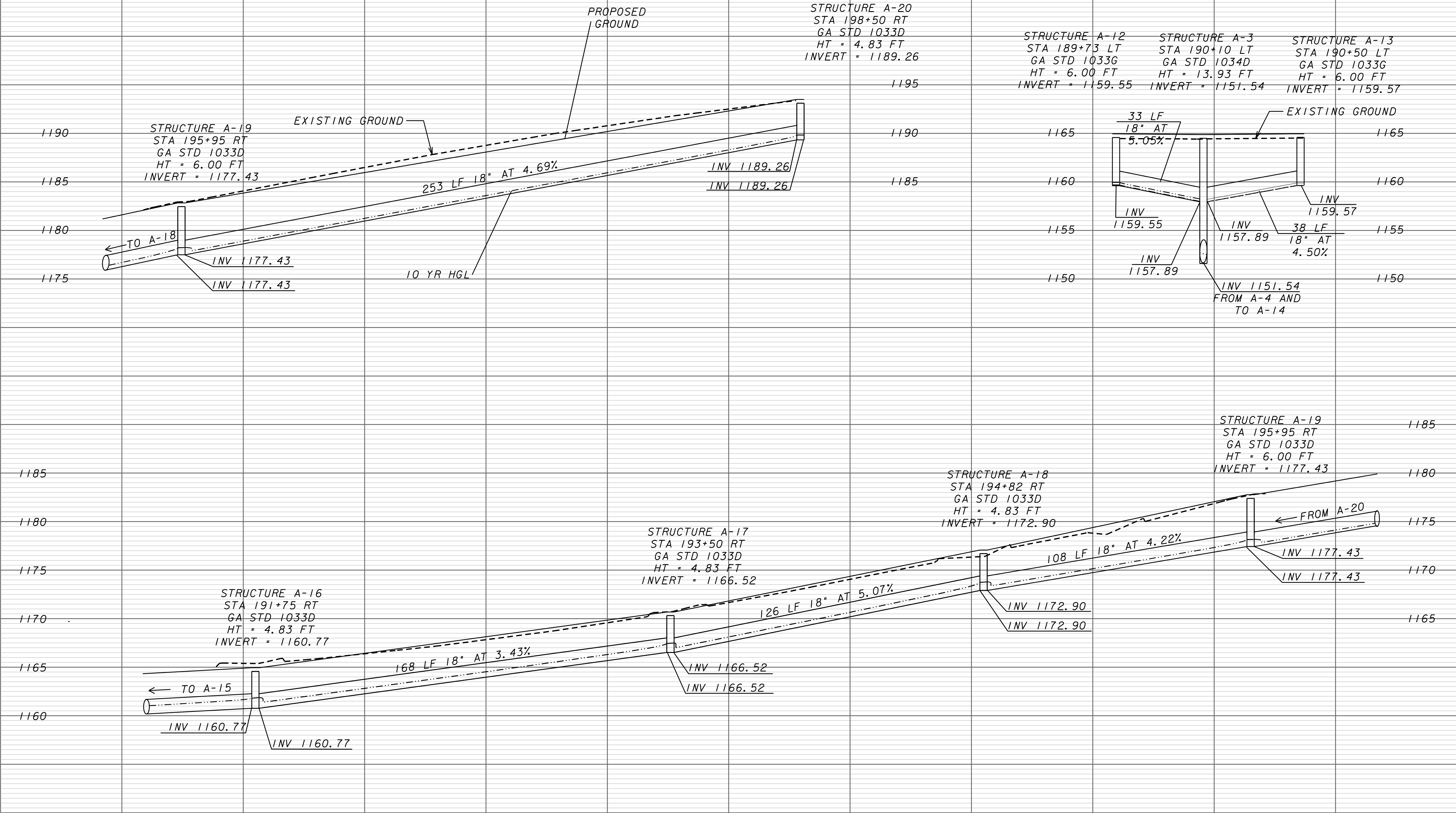
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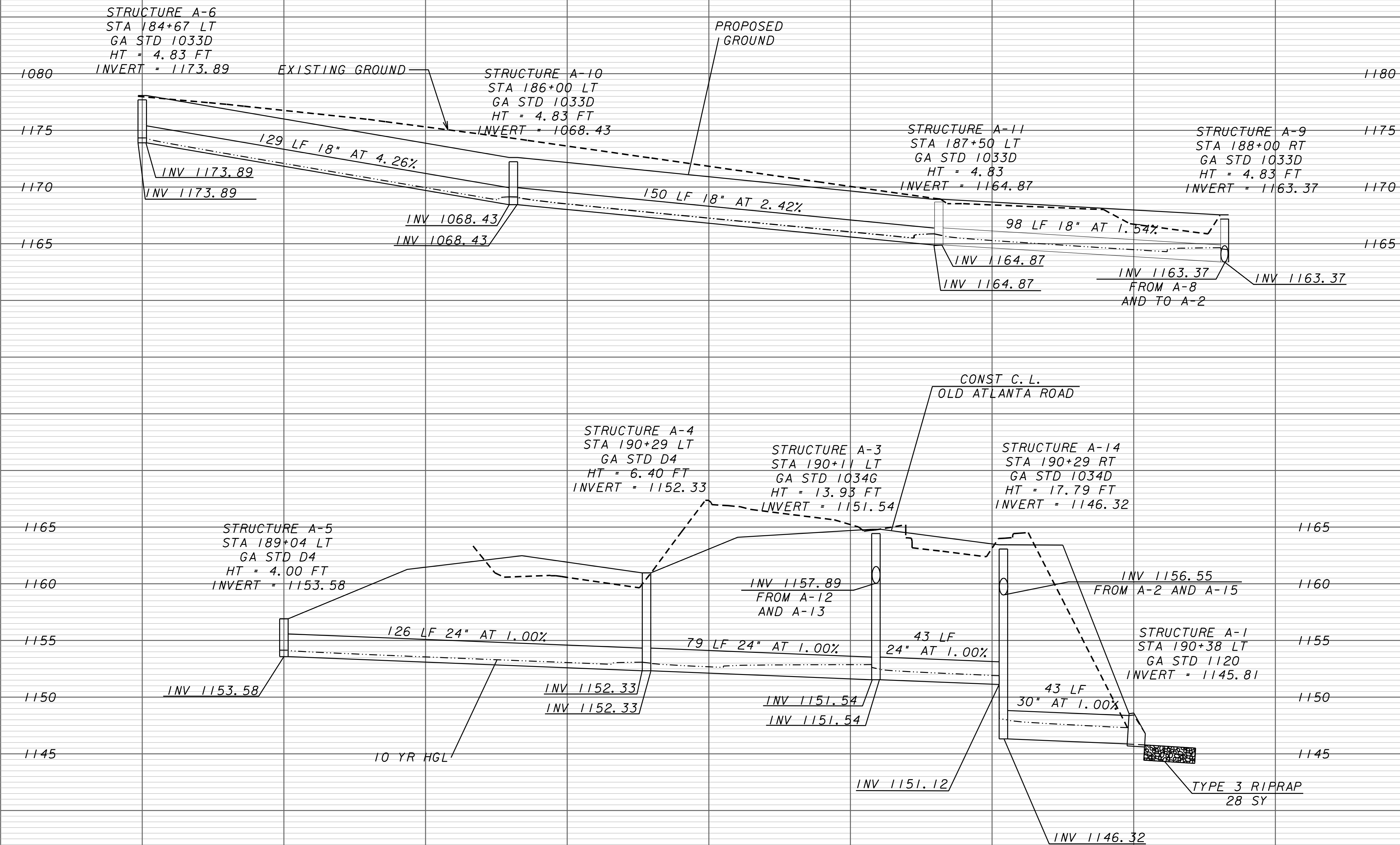
FORSYTH COUNTY
ENGINEERING DEPARTMENT

DRAINAGE PROFILES

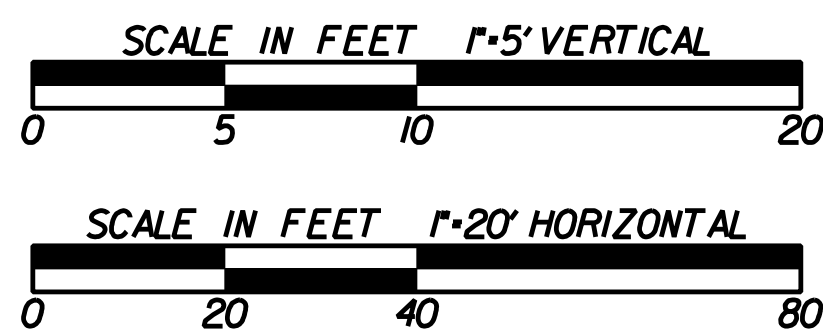
WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
22-01





GRESHAM
SMITH AND
PARTNERS



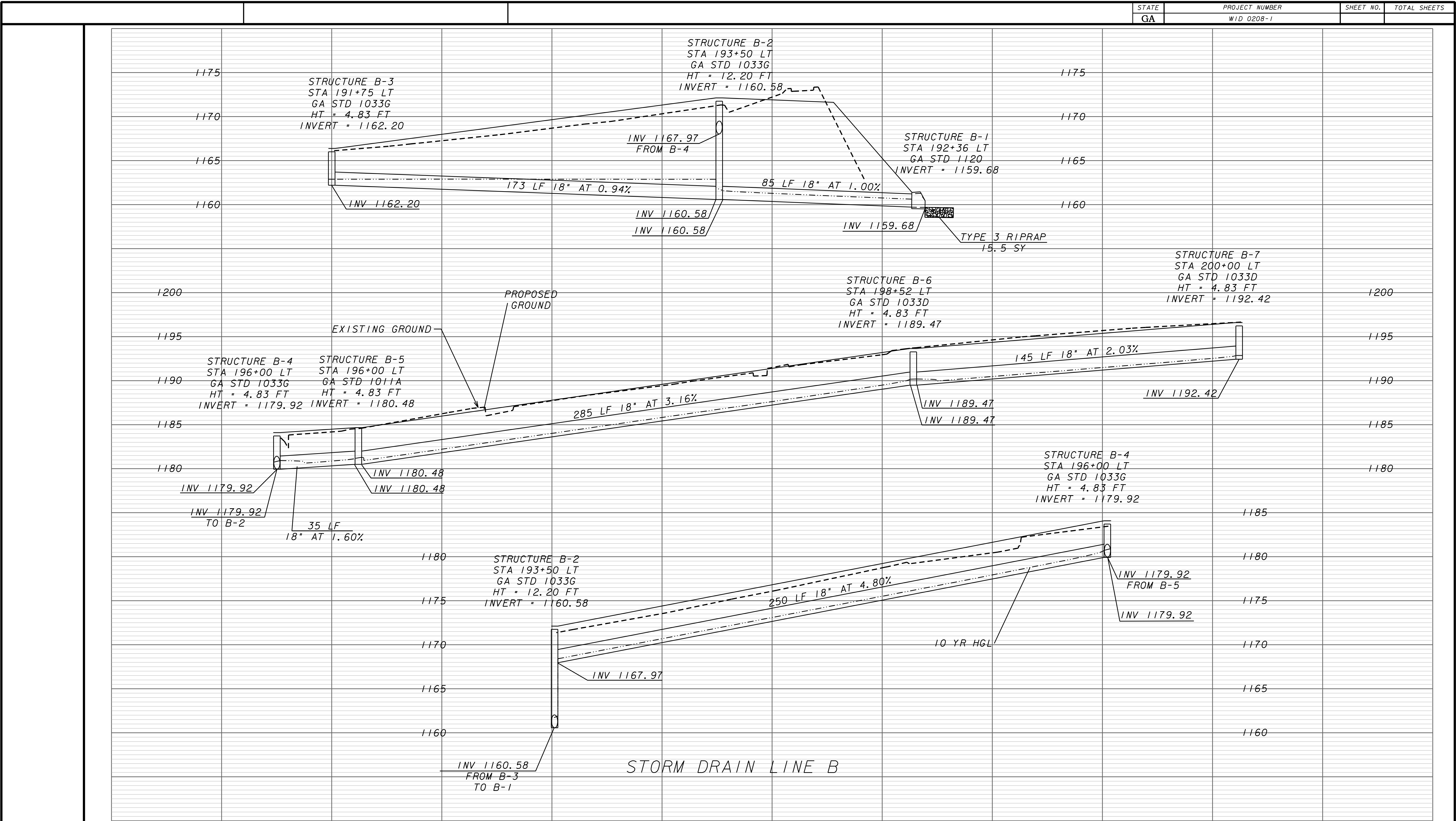
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FORSYTH COUNTY
ENGINEERING DEPARTMENT

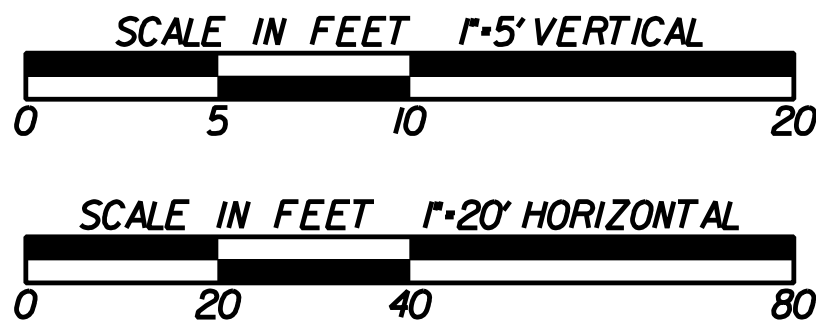
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WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
22-03



GRESHAM
SMITH AND
PARTNERS



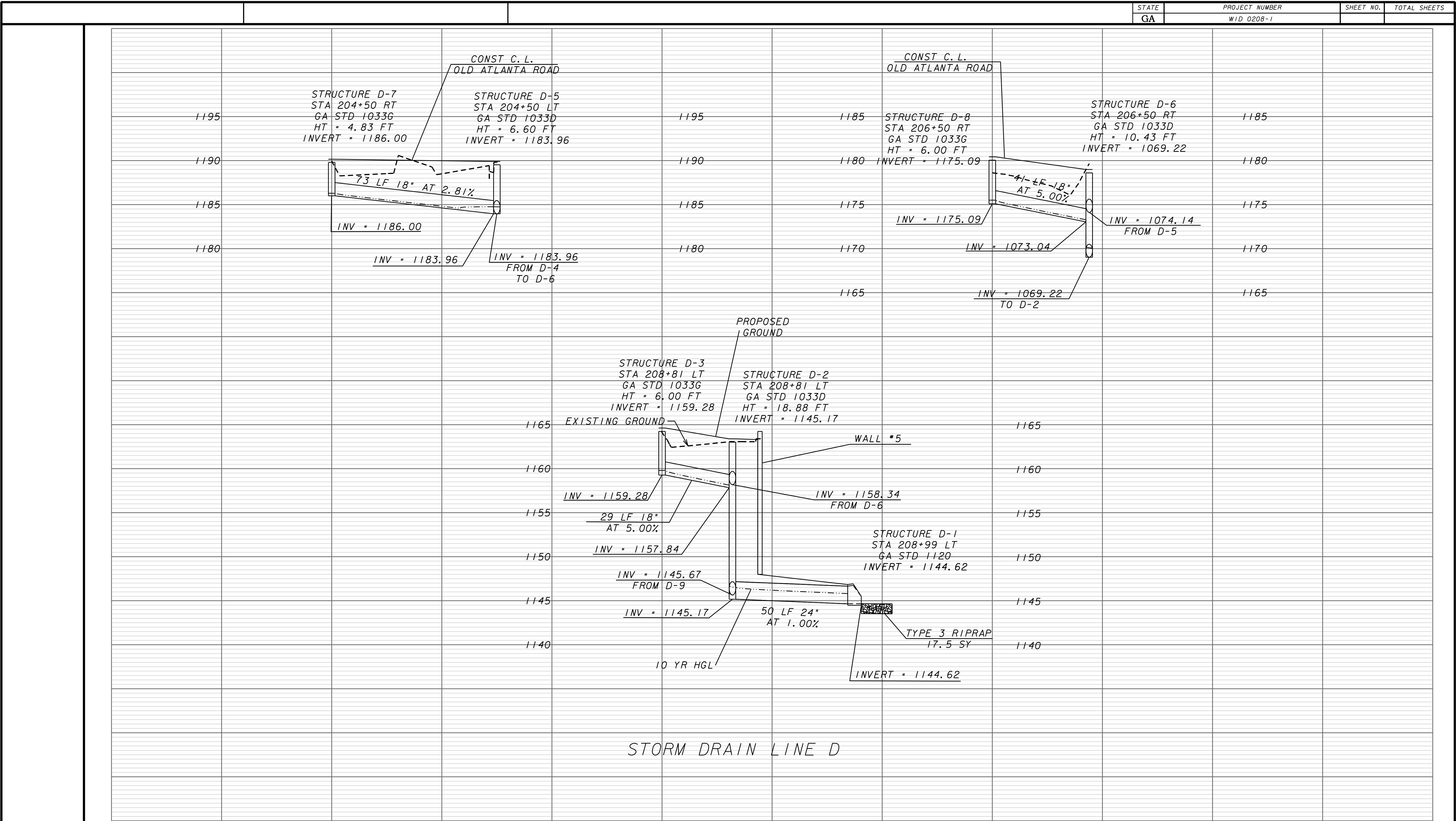
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FORSYTH COUNTY
ENGINEERING DEPARTMENT

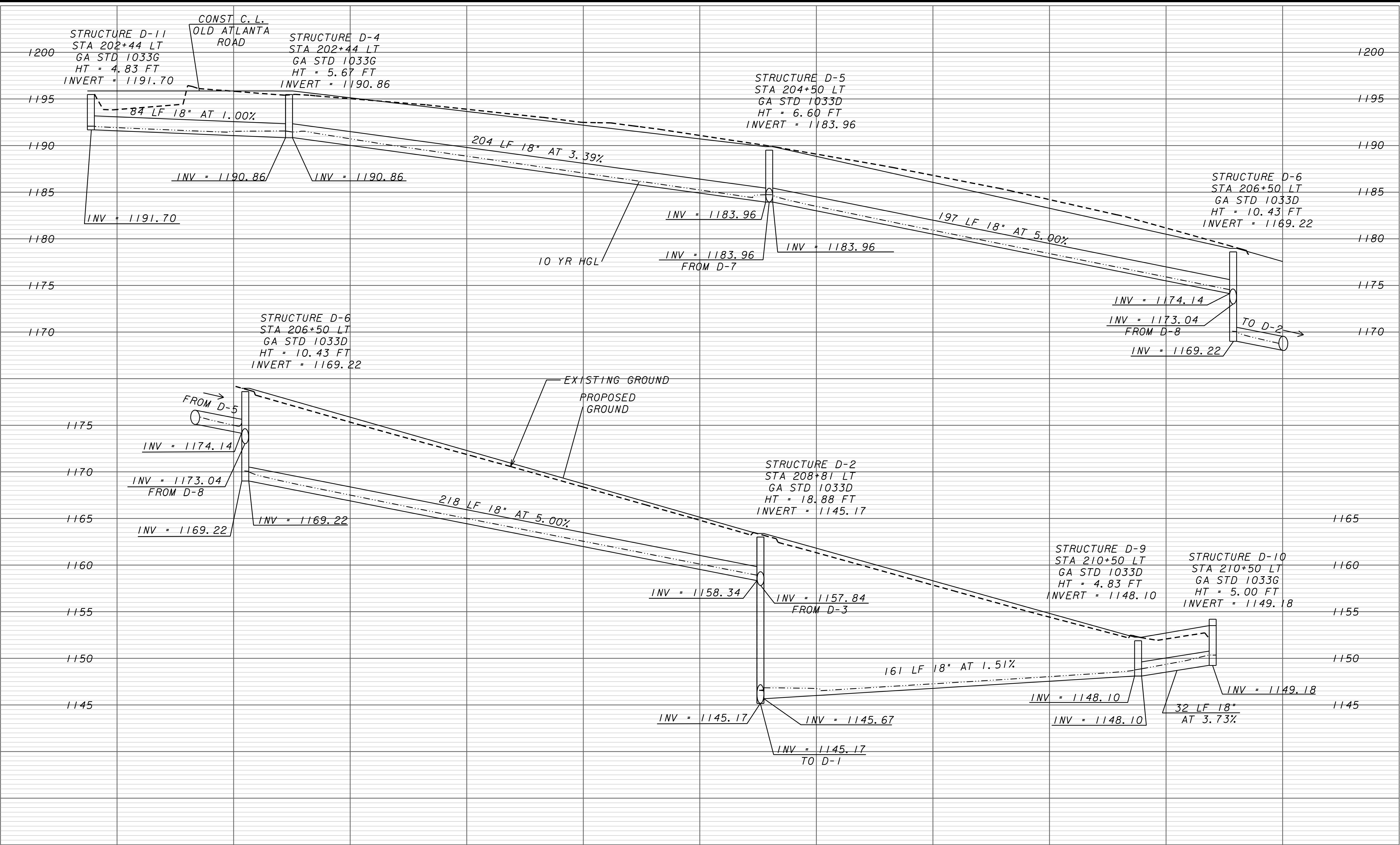
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WID 0208-1 (PHASE 5)
FORSYTH COUNTY

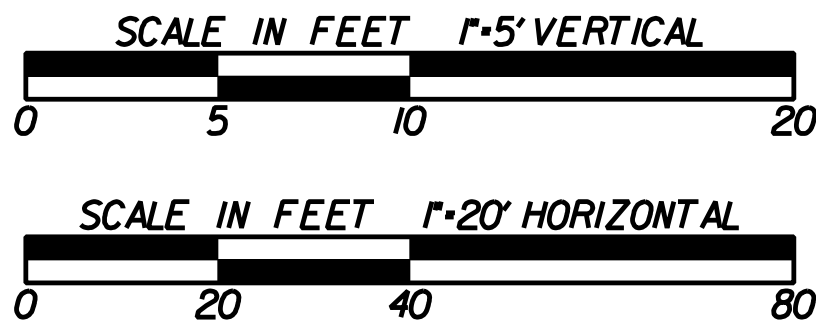
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 G R E S H A M S M I T H A N D P A R T N E R S	<div style="display: flex; justify-content: space-around;"><div style="text-align: center;"><small>SCALE IN FEET 1"=5' VERTICAL</small> 0 5 10 20</div><div style="text-align: center;"><small>SCALE IN FEET 1"=20' HORIZONTAL</small> 0 20 40 80</div></div>	REVISION DATES	FORSYTH COUNTY ENGINEERING DEPARTMENT	
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			WID 0208-1 (PHASE 5) FORSYTH COUNTY	
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GRESHAM
SMITH AND
PARTNERS



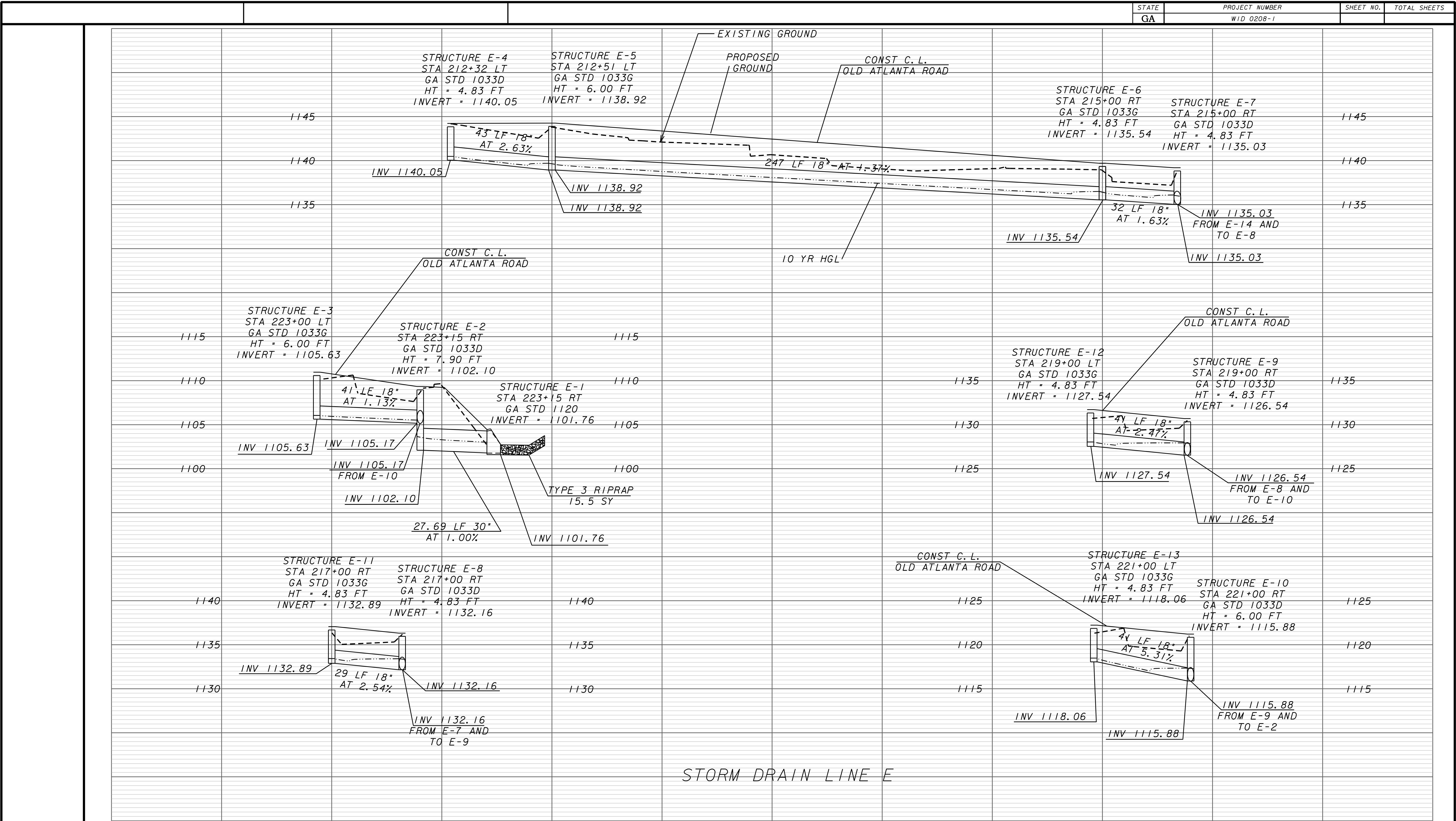
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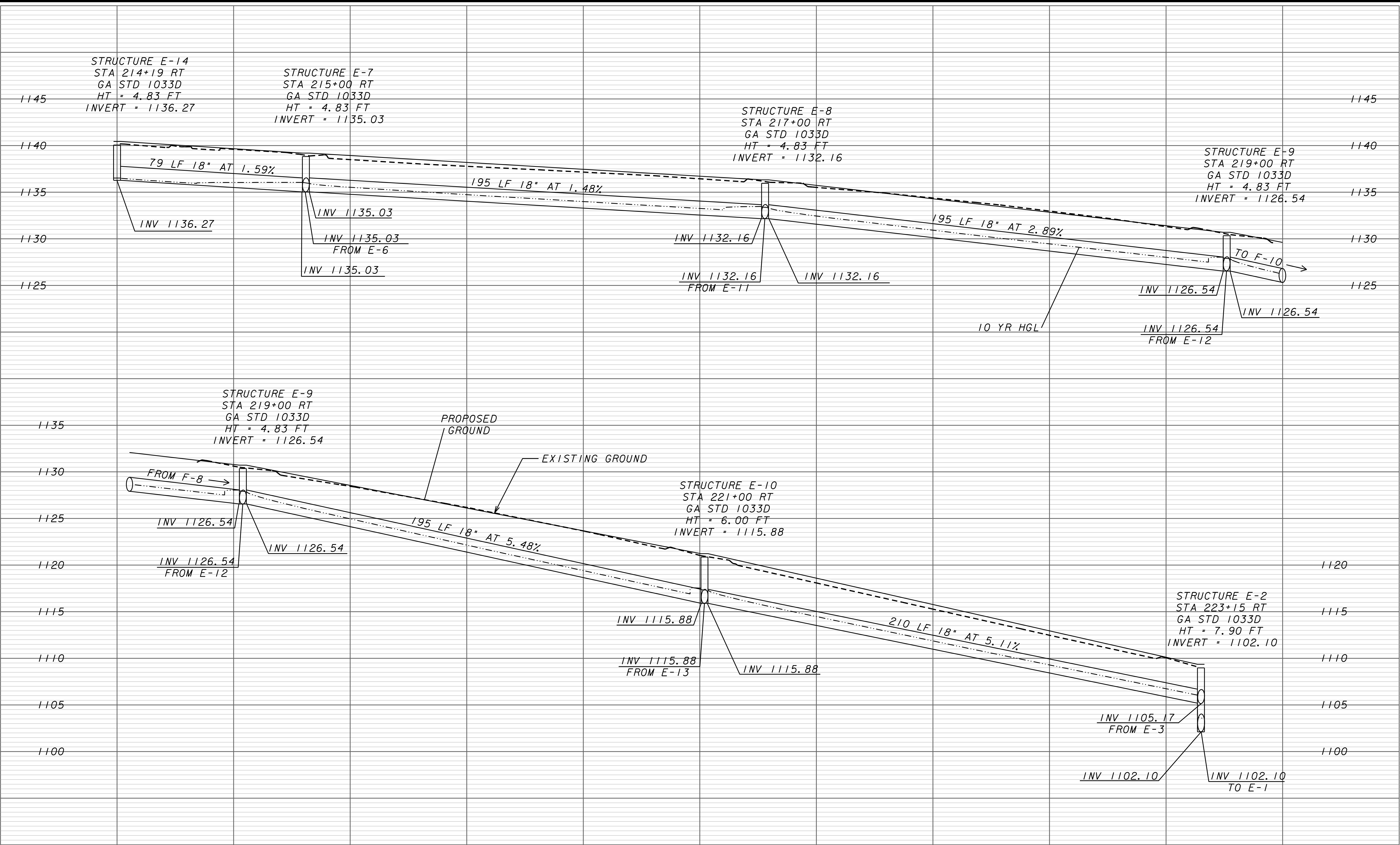
FORSYTH COUNTY
ENGINEERING DEPARTMENT

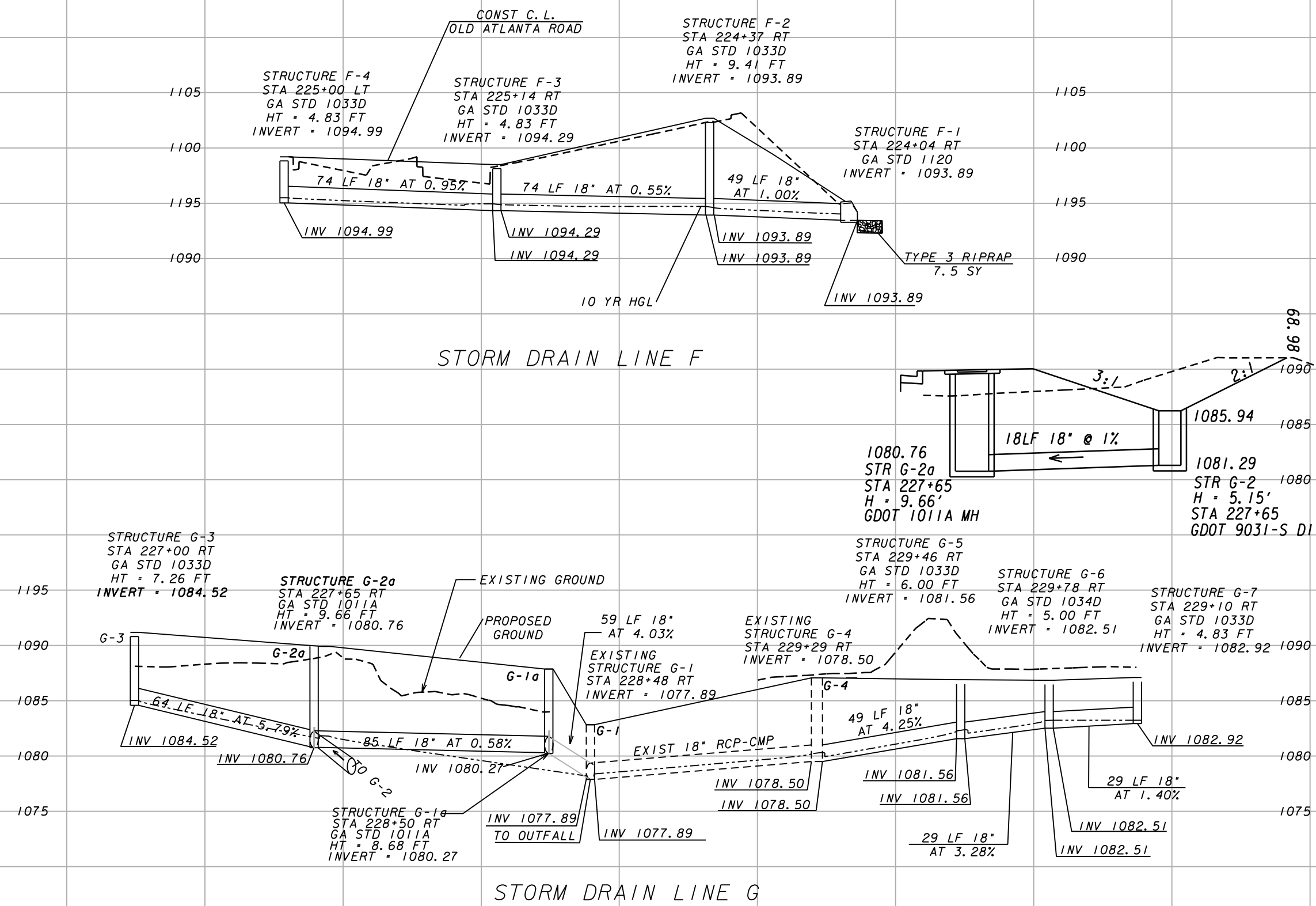
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WID 0208-1 (PHASE 5)
FORSYTH COUNTY

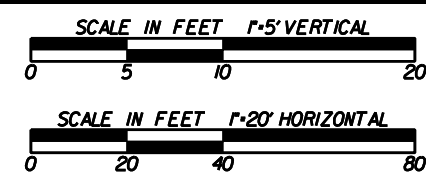
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GRESHAM
SMITH AND
PARTNERS



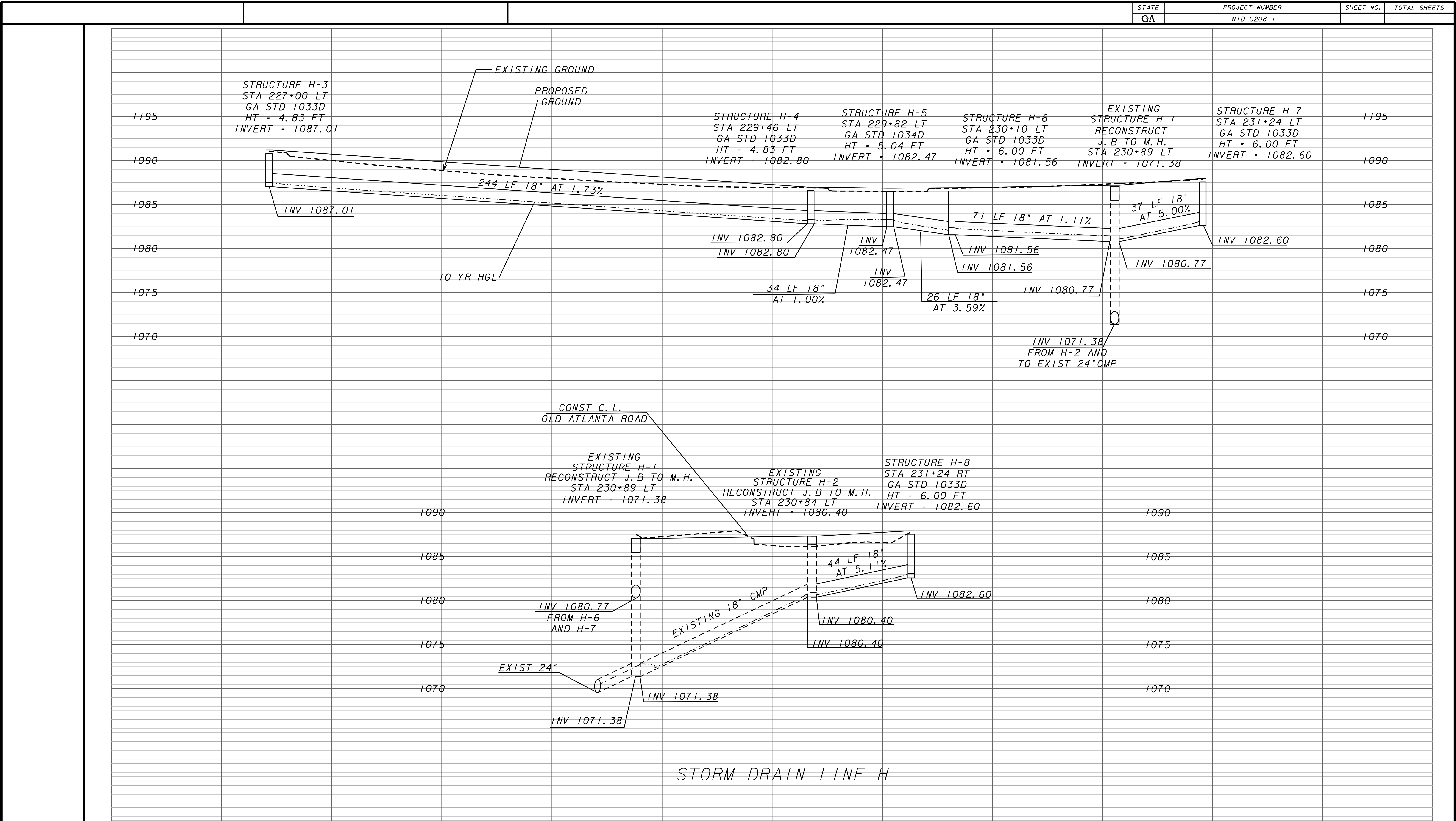
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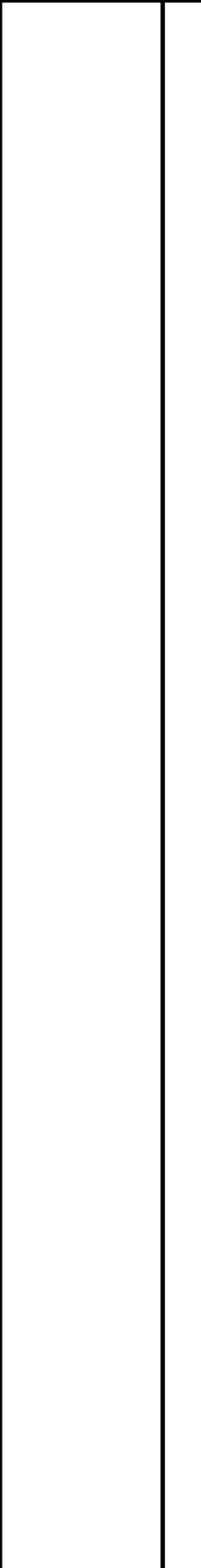
FORSYTH COUNTY
ENGINEERING DEPARTMENT

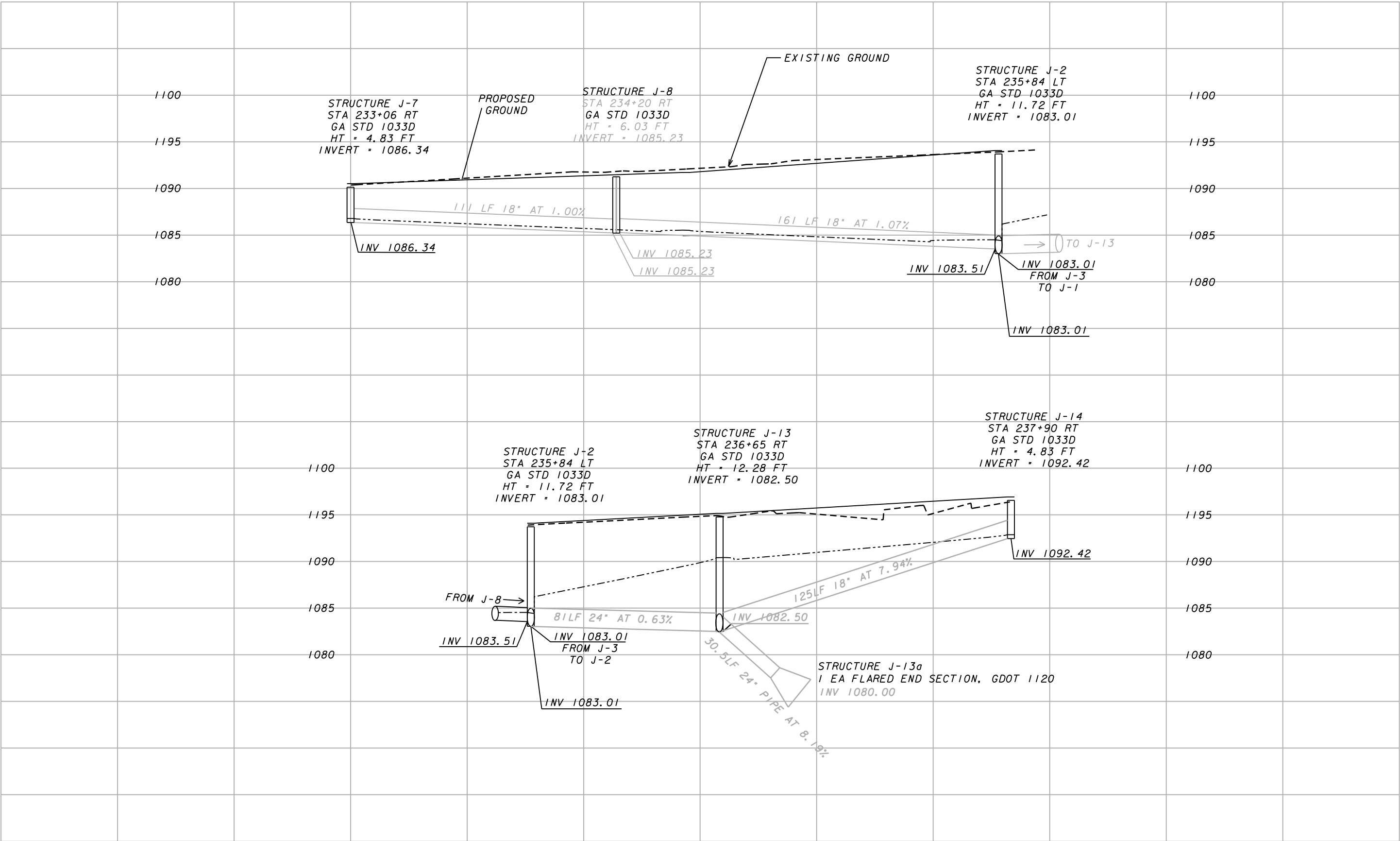
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WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
22-09







3/1/2007 G20E06

GRESHAM
SMITH AND
PARTNERS

SCALE IN FEET 1"=5' VERTICAL
0 5 10 20

SCALE IN FEET 1"=20' HORIZONTAL
0 20 40 80

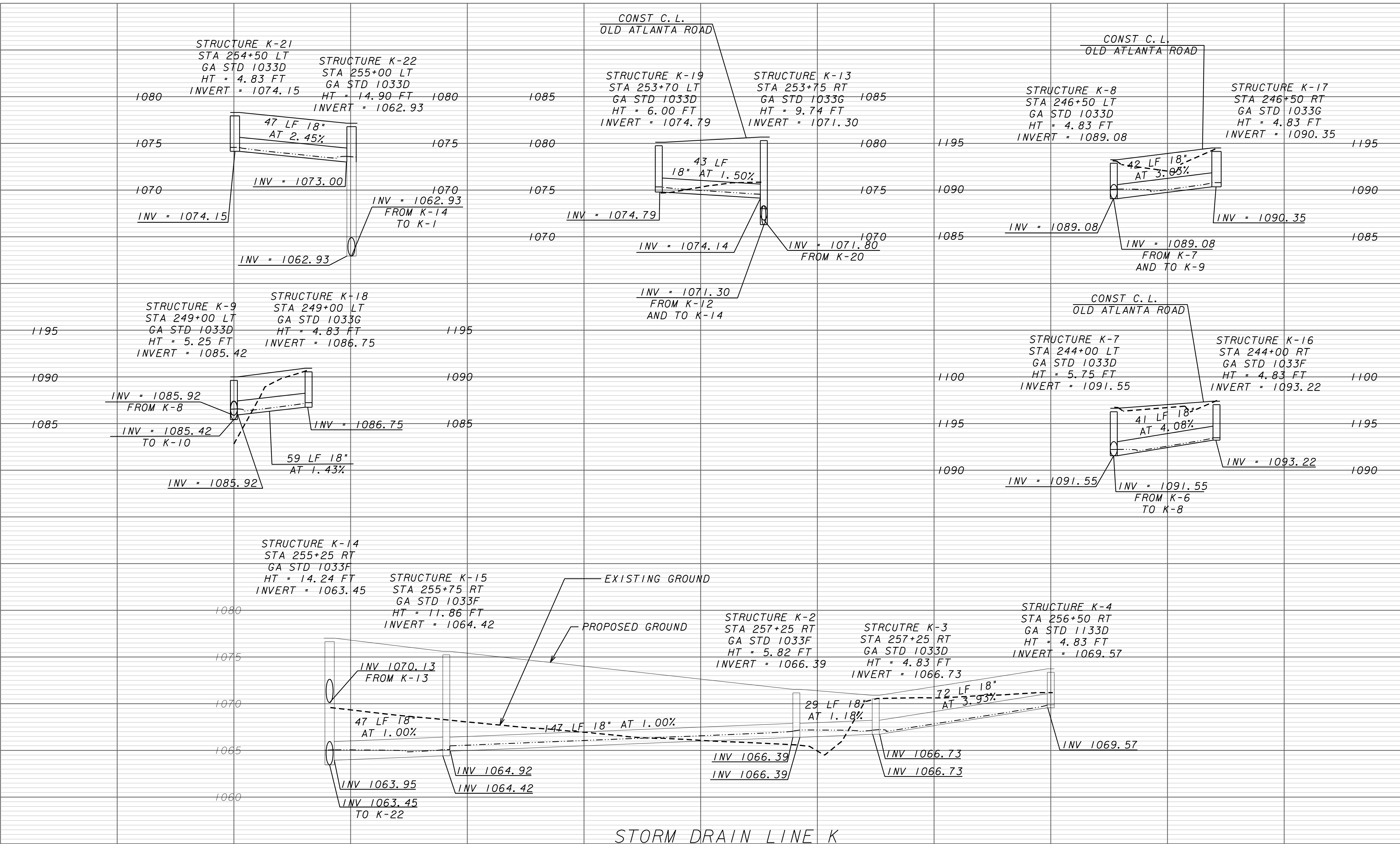
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FORSYTH COUNTY
ENGINEERING DEPARTMENT

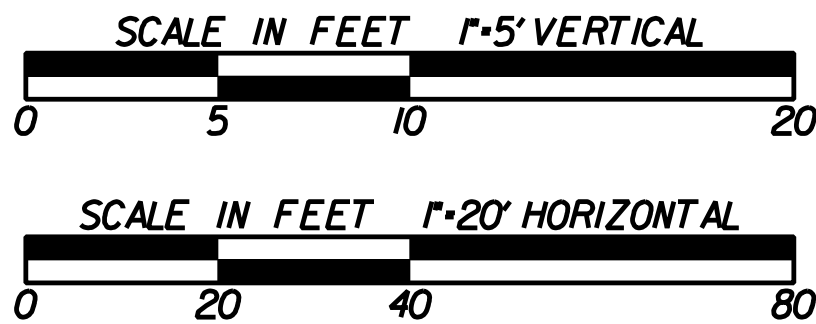
DRAINAGE PROFILES

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
22-12



GRESHAM
SMITH AND
PARTNERS



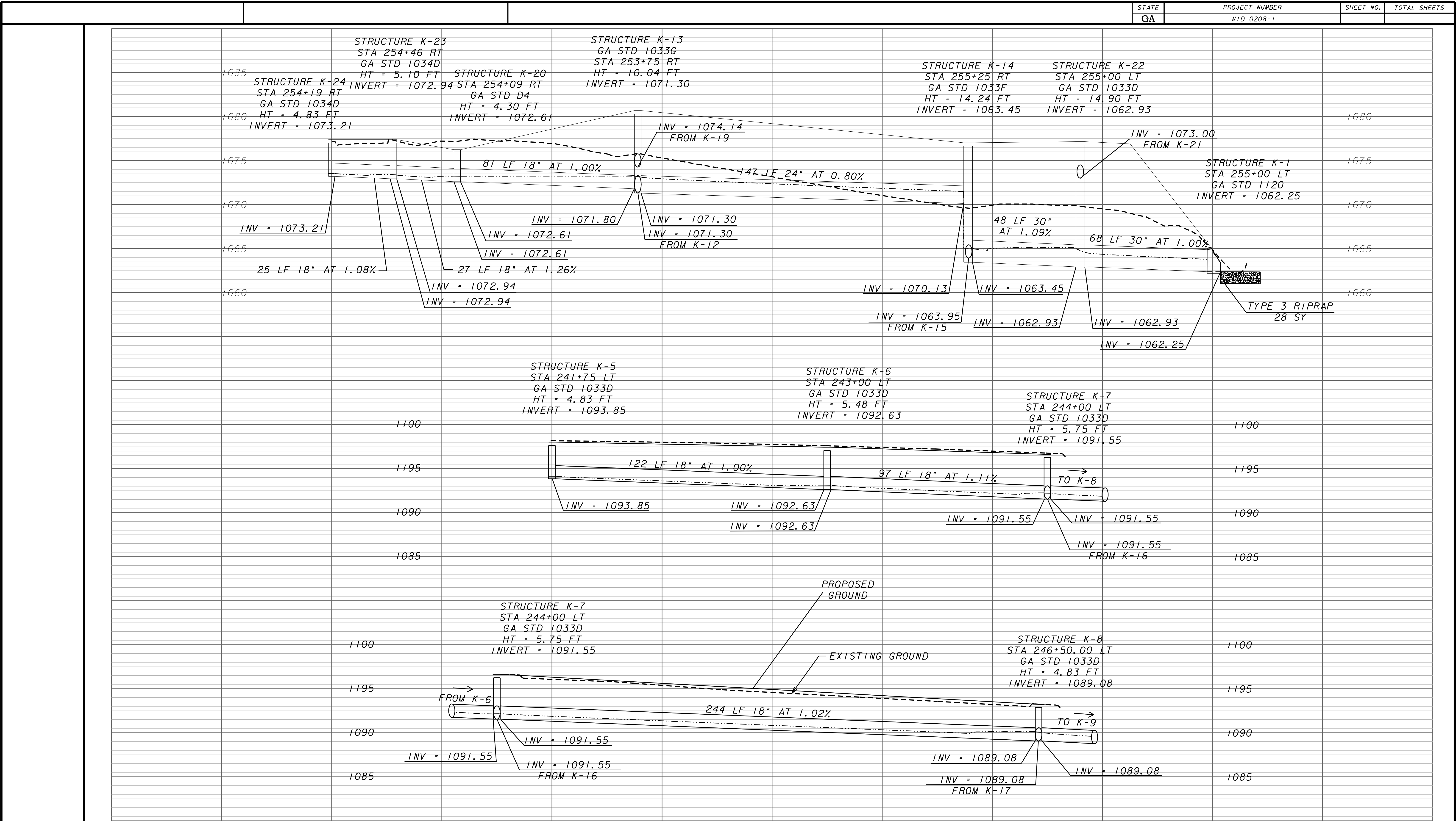
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FORSYTH COUNTY
ENGINEERING DEPARTMENT

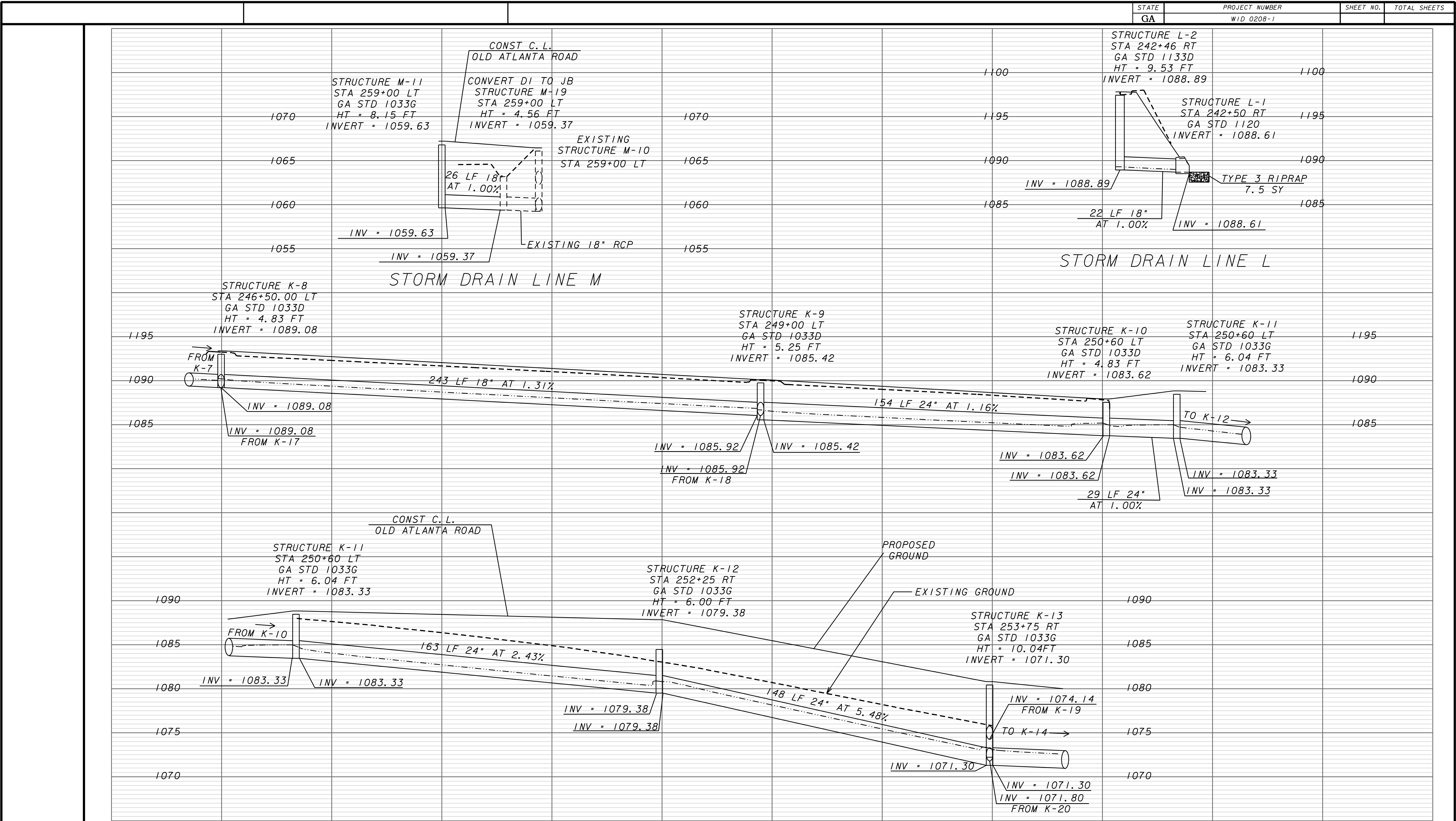
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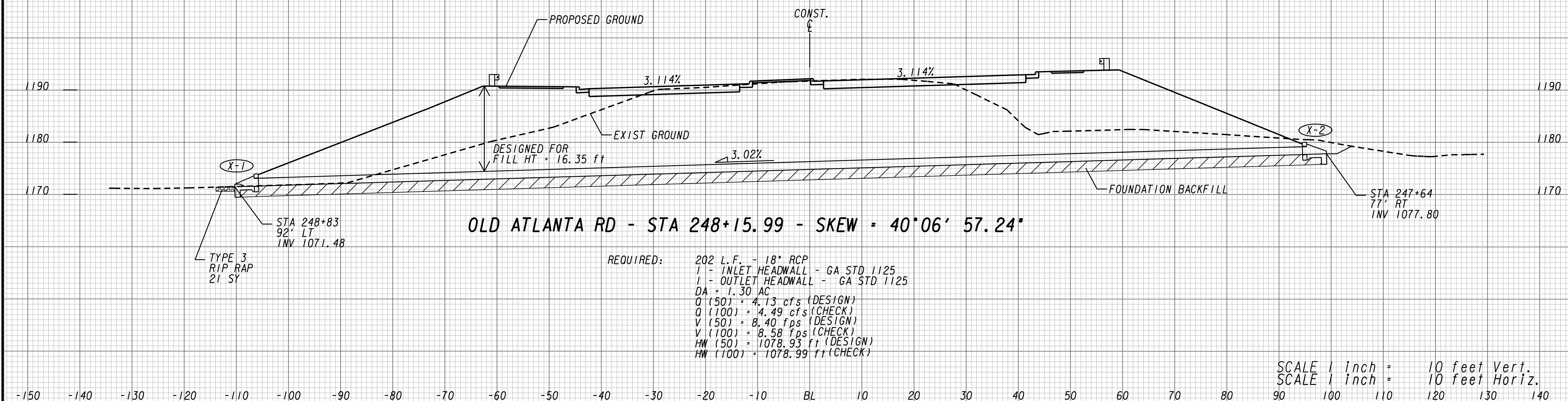
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FORSYTH COUNTY

DRAWING No.
22-13



 GRESHAM SMITH AND PARTNERS	 SCALE IN FEET 1"=5' VERTICAL  SCALE IN FEET 1"=20' HORIZONTAL	<table border="1"><thead><tr><th colspan="2">REVISION DATES</th></tr></thead><tbody><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr></tbody></table>	REVISION DATES								FORSYTH COUNTY ENGINEERING DEPARTMENT	
			REVISION DATES									
DRAINAGE PROFILES												
WID 0208-1 (PHASE 5) FORSYTH COUNTY												
DRAWING No. 22-14												





SCALE 1 inch = 10 feet Vert.
SCALE 1 inch = 10 feet Horiz.



GRESHAM
SMITH AND
PARTNERS

REVISION DATES		

FORSYTH COUNTY
ENGINEERING DEPARTMENT

DRAINAGE CROSS SECTIONS

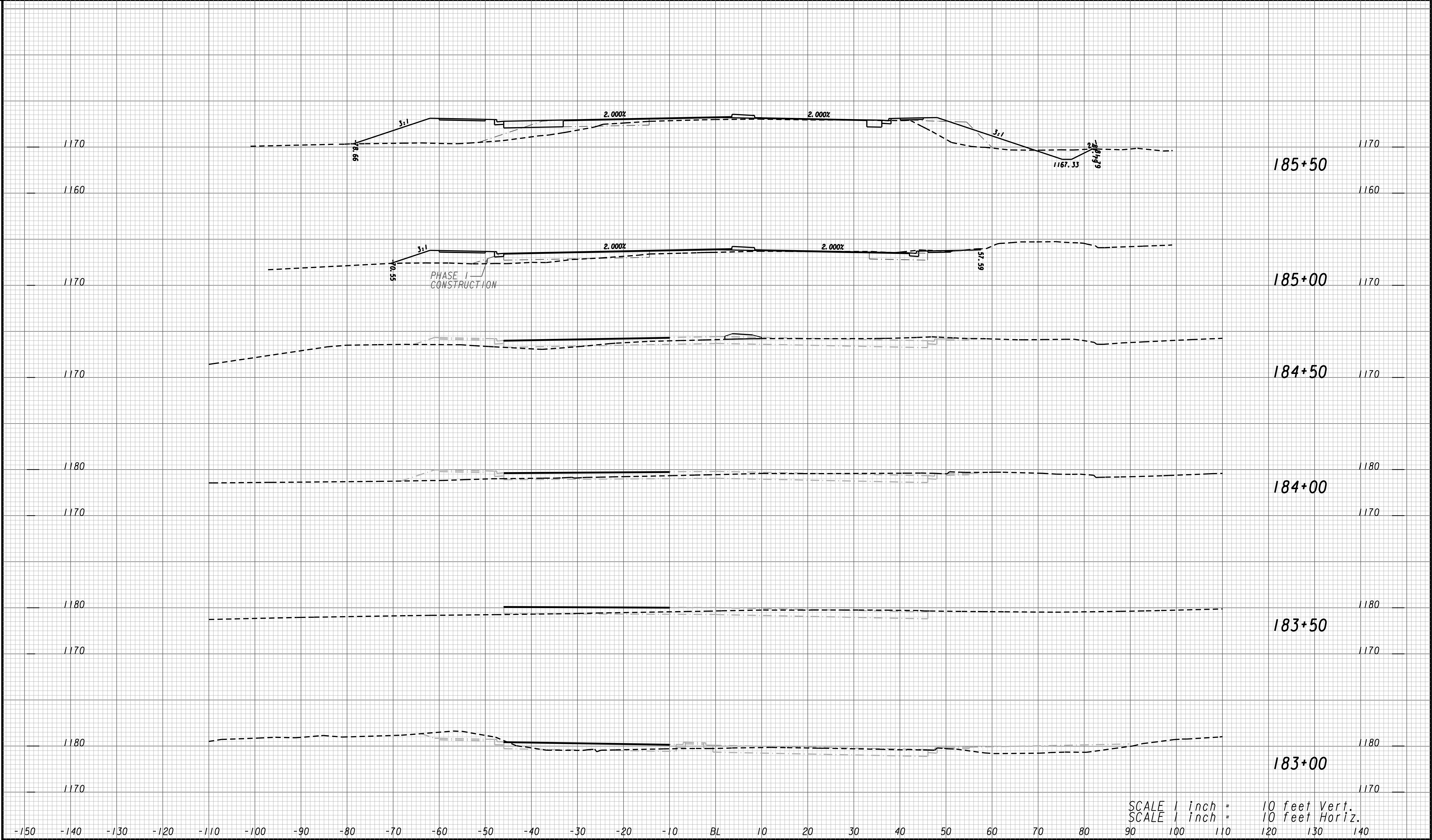
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FORSYTH COUNTY

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G R E S H A M
S M I T H A N D
P A R T N E R S

REVISION DATES

FORSYTH COUNTY
ENGINEERING DEPARTMENT

EARTHWORK CROSS SECTIONS

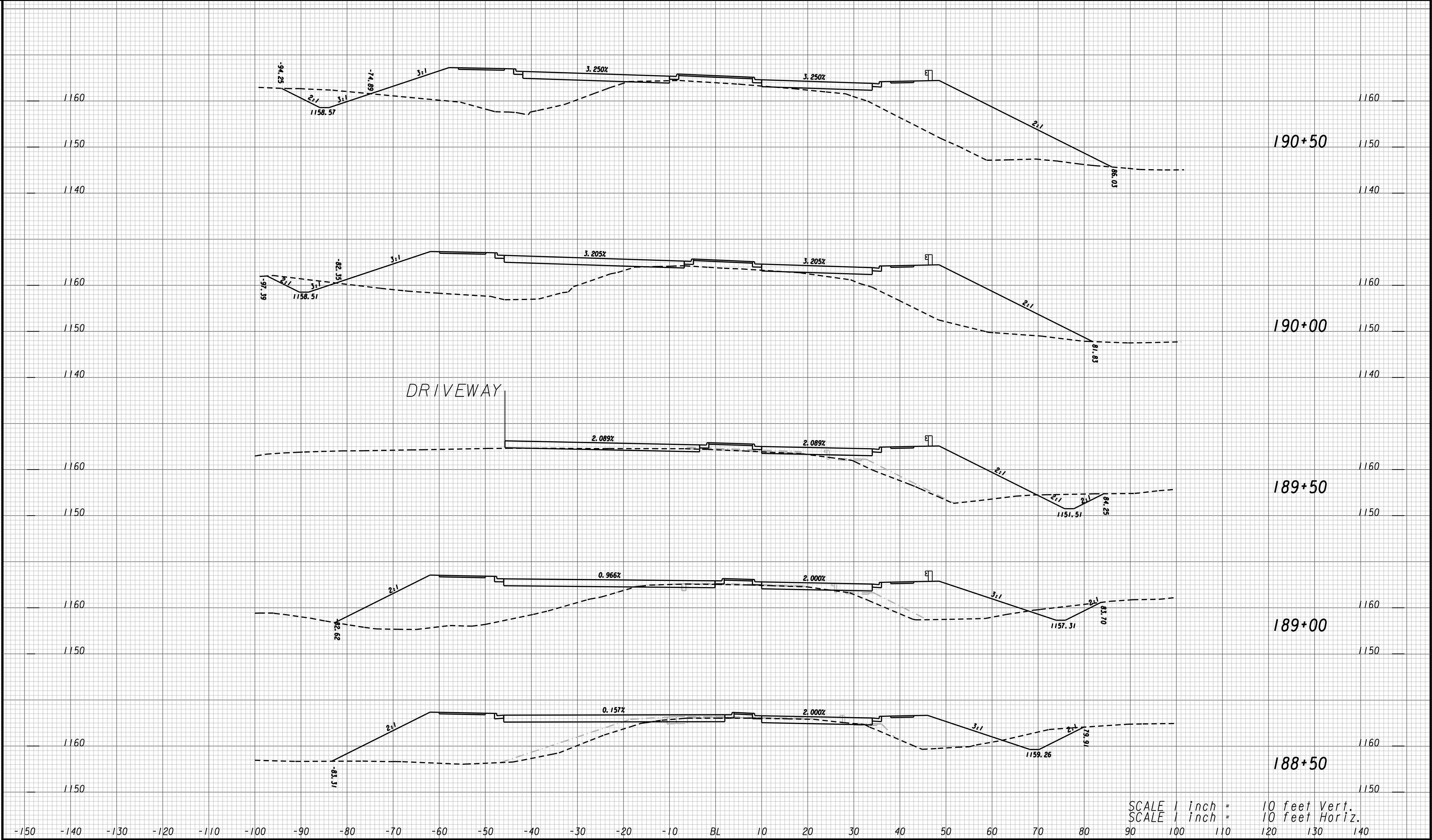
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FORSYTH COUNTY

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SCALE 1 inch = 10 feet Vert.
SCALE 1 inch = 10 feet Horiz.



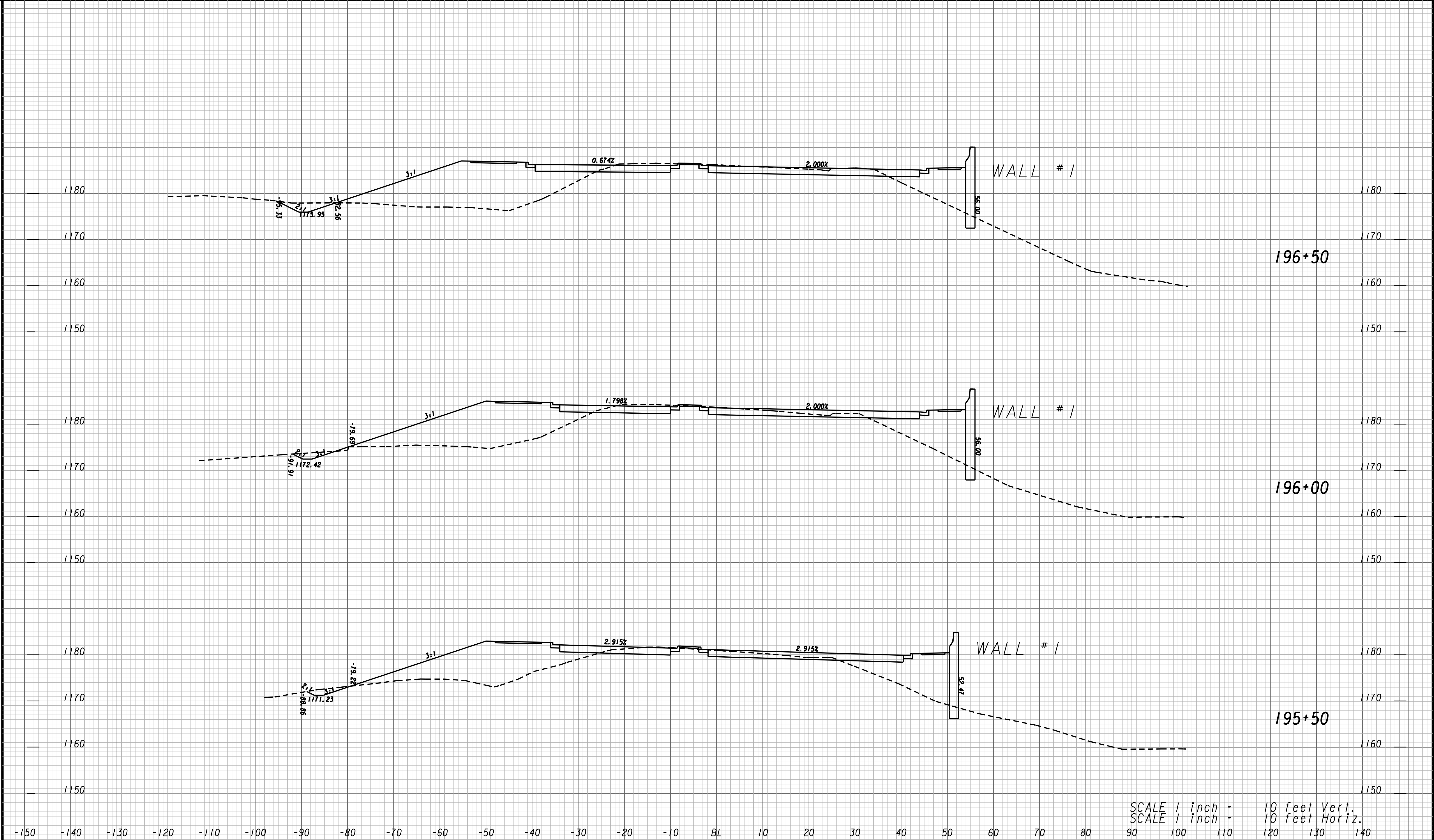
GRESHAM
SMITH AND
PARTNERS

REVISION DATES			FORSYTH COUNTY ENGINEERING DEPARTMENT	
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GRESHAM
SMITH AND
PARTNERS

REVISION DATES

FORSYTH COUNTY
ENGINEERING DEPARTMENT

EARTHWORK CROSS SECTIONS

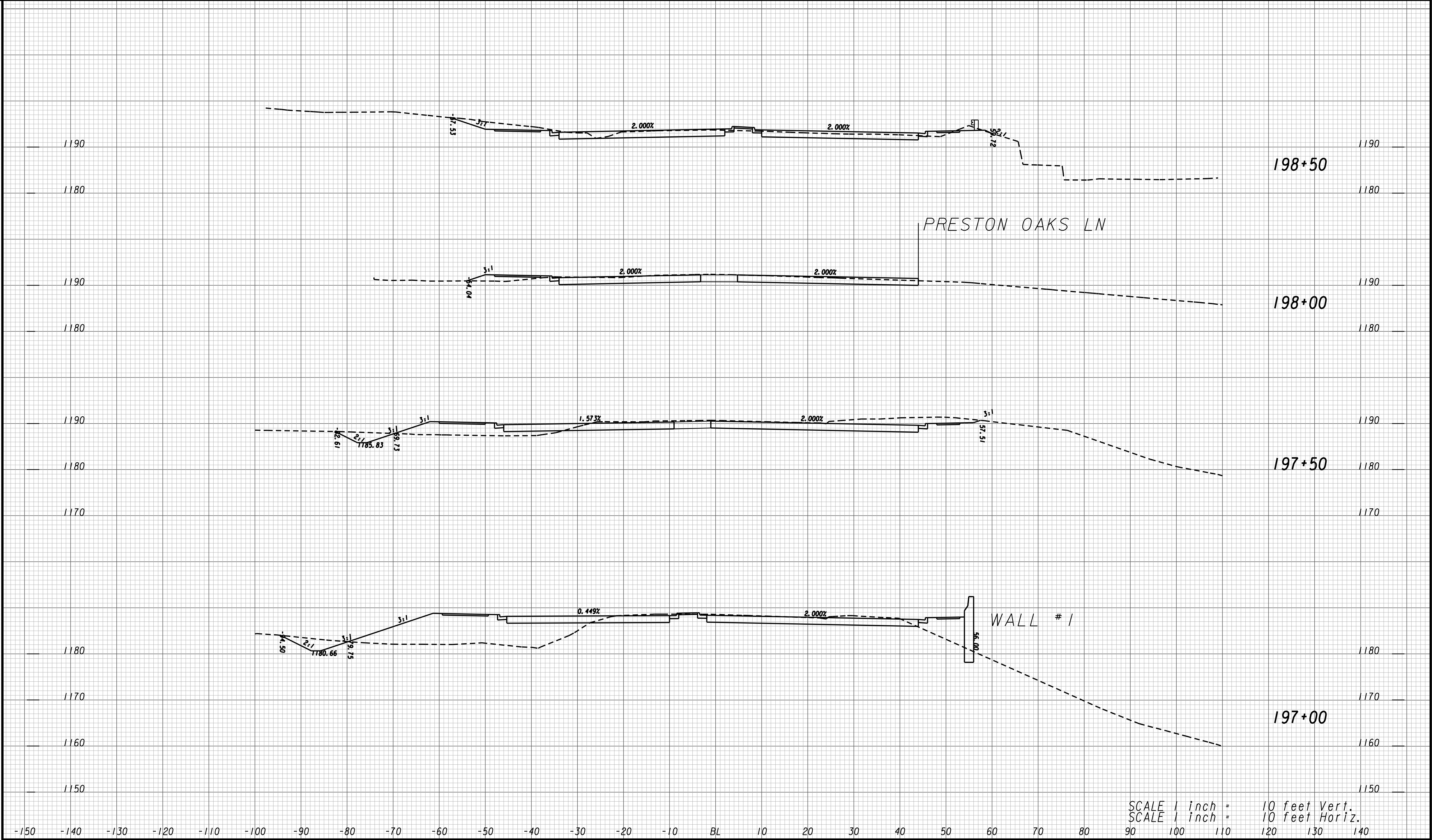
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FORSYTH COUNTY

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GRESHAM
SMITH AND
PARTNERS

REVISION DATES

FORSYTH COUNTY
ENGINEERING DEPARTMENT

EARTHWORK CROSS SECTIONS

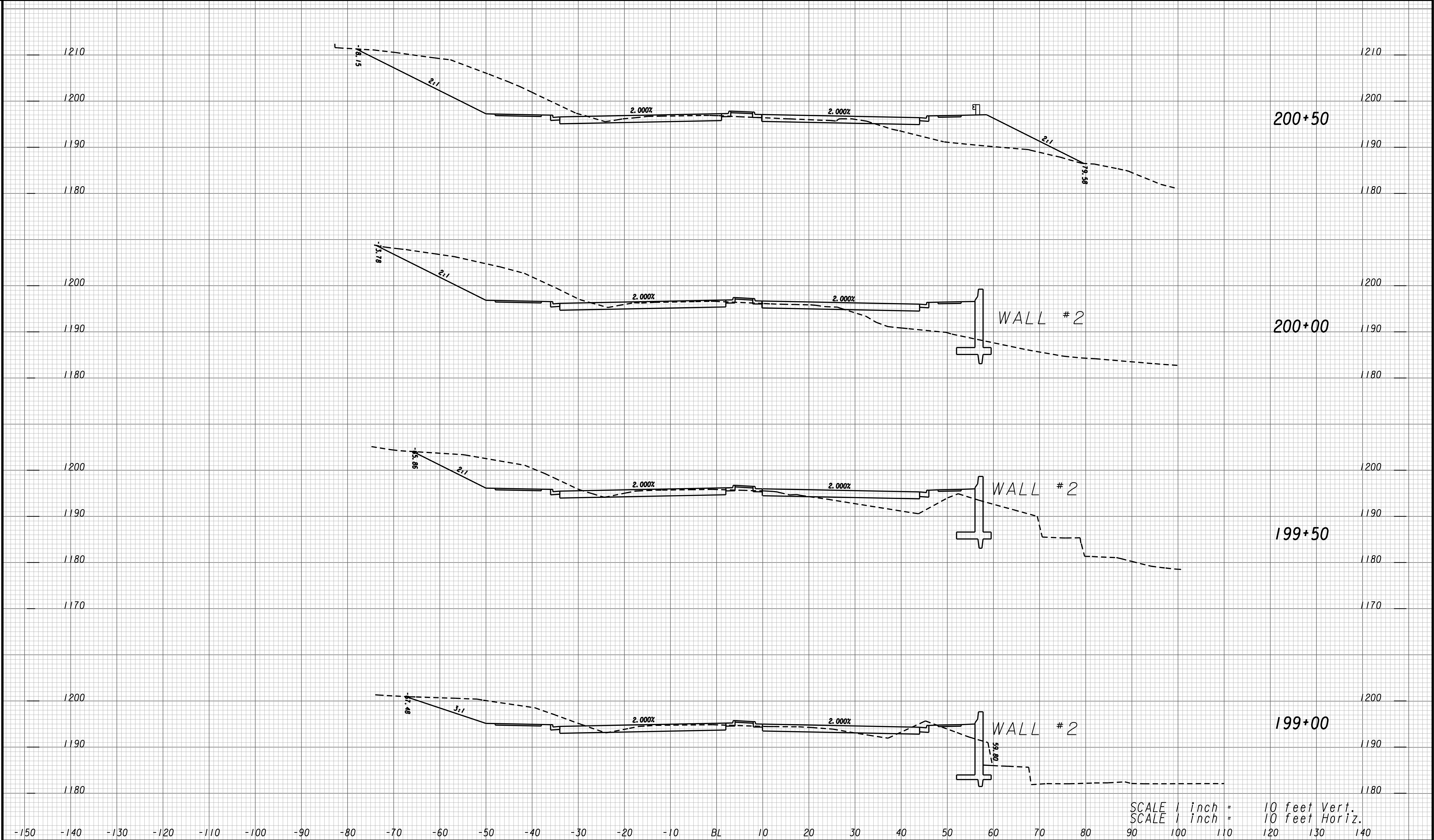
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SCALE 1 inch = 10 feet Vert.
SCALE 1 inch = 10 feet Horiz.



G R E S H A M
S M I T H A N D
P A R T N E R S

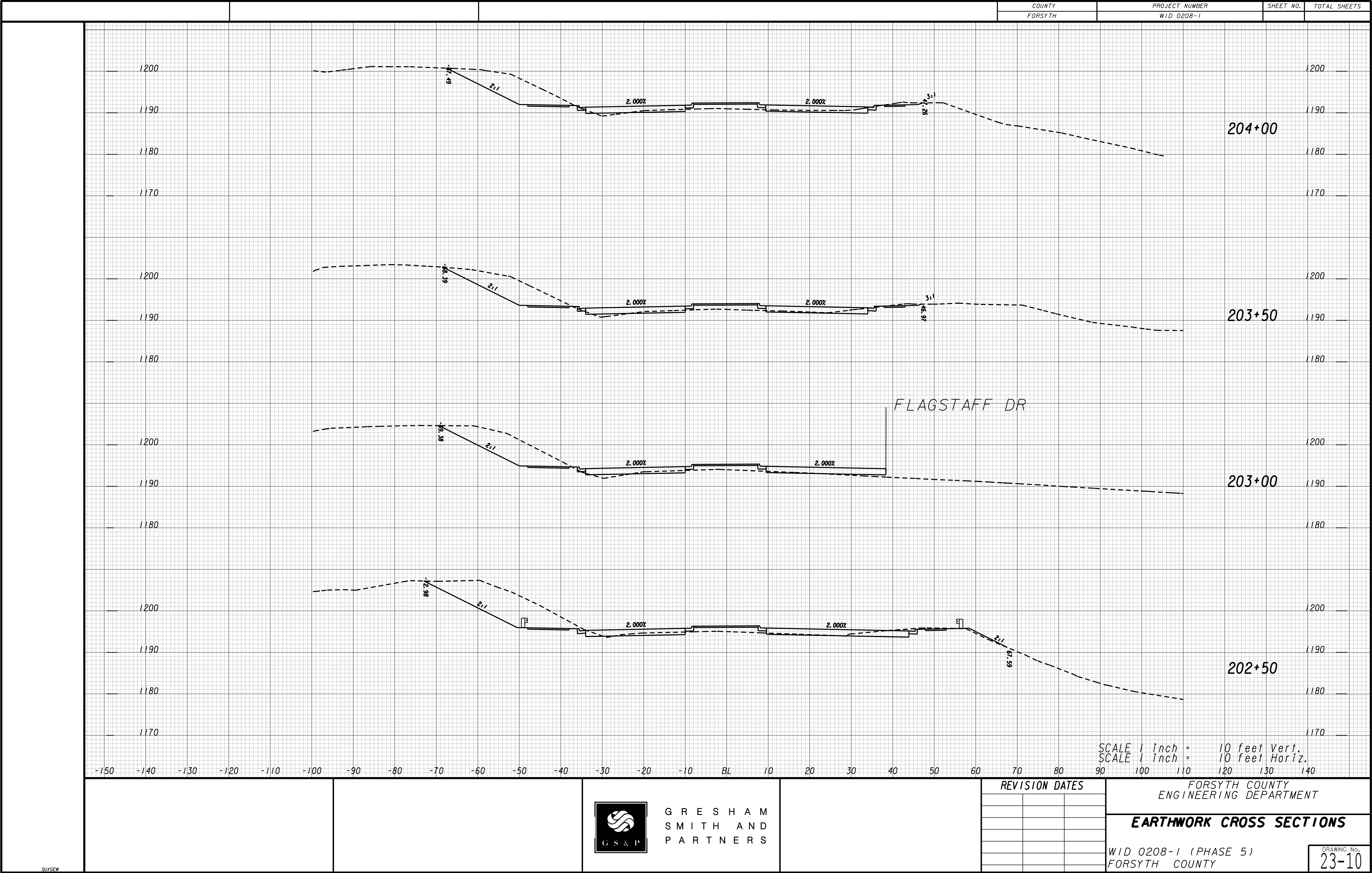
REVISION DATES

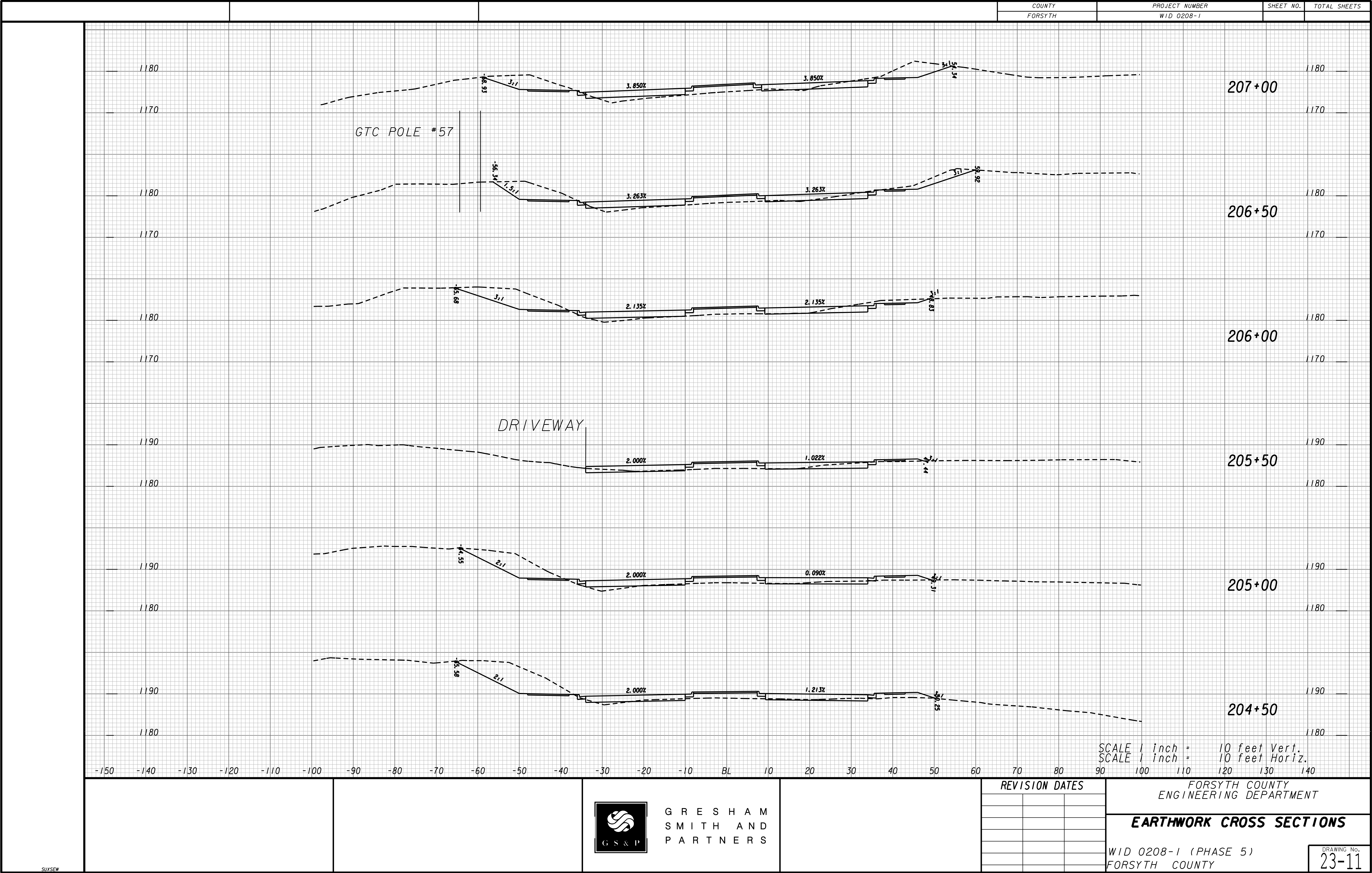
FORSYTH COUNTY
ENGINEERING DEPARTMENT

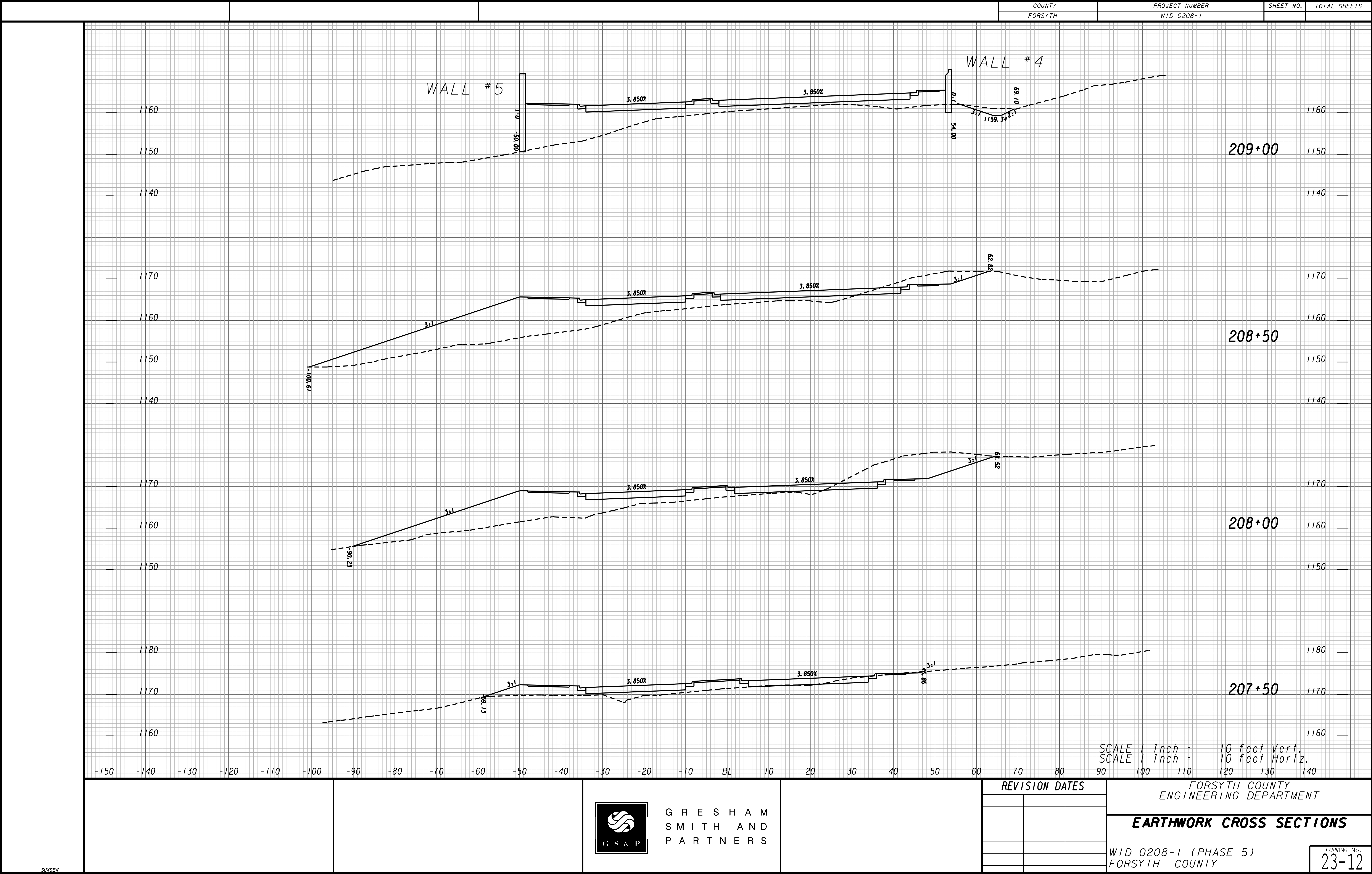
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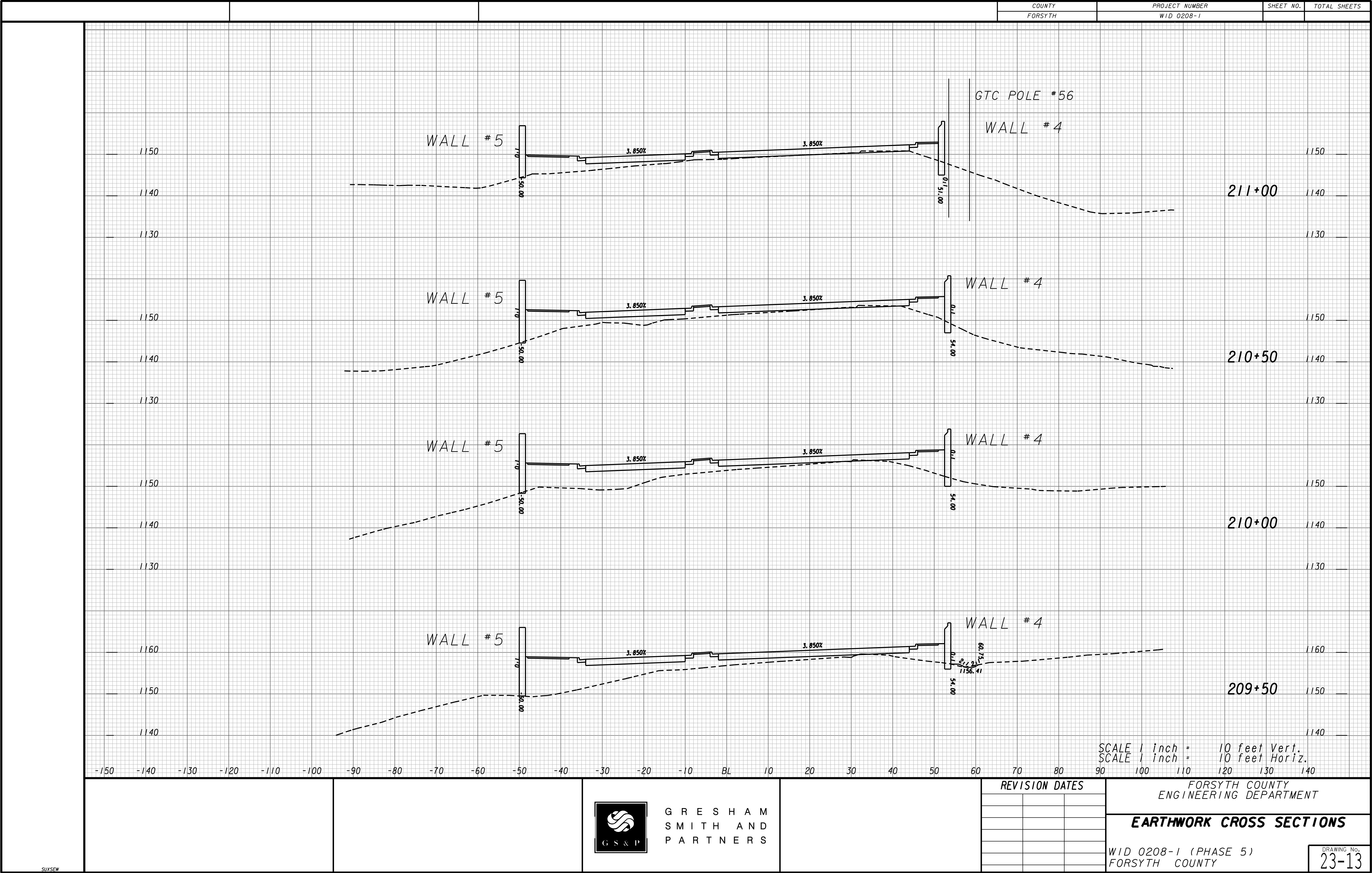
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FORSYTH COUNTY

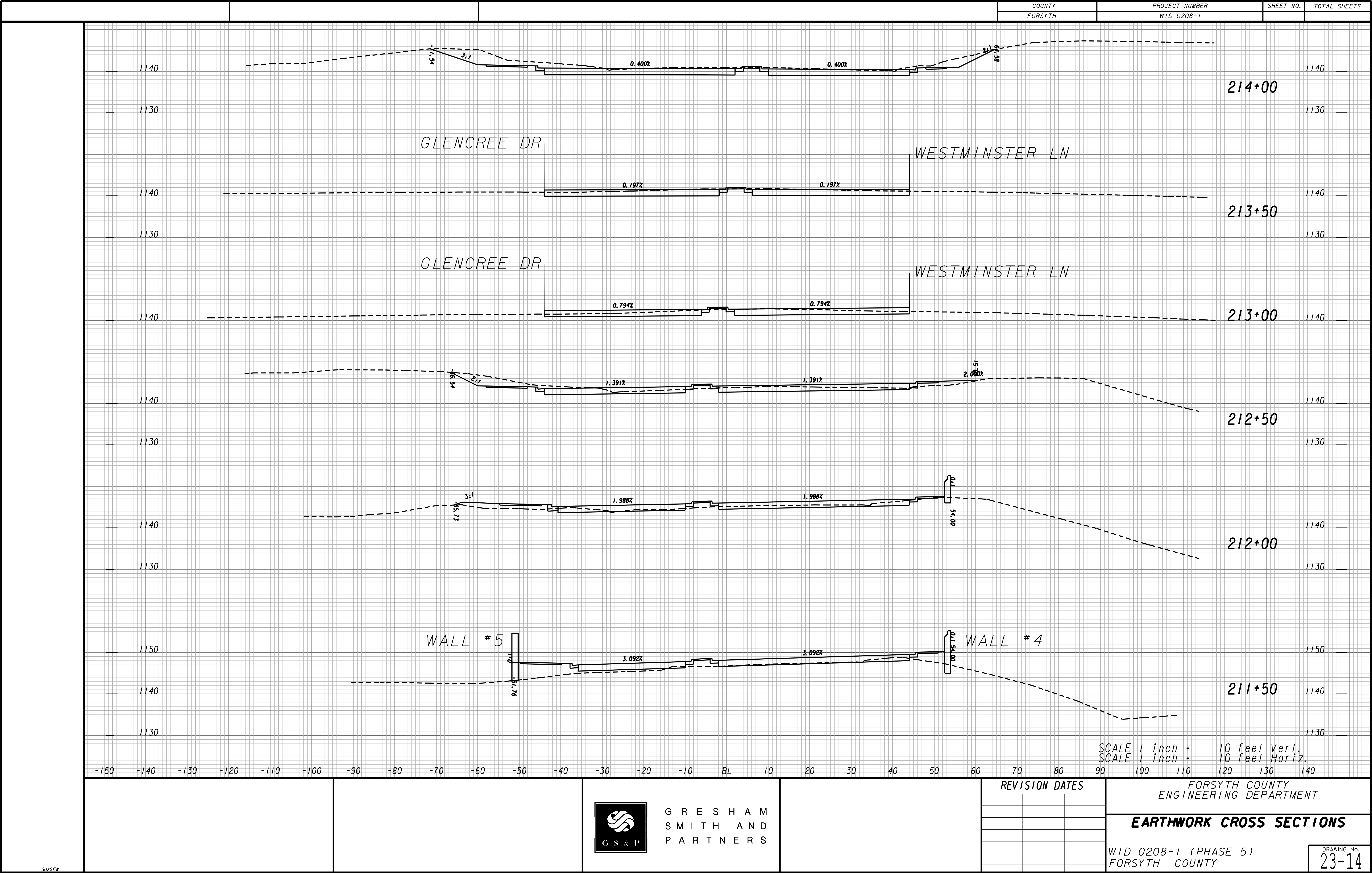
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23-08

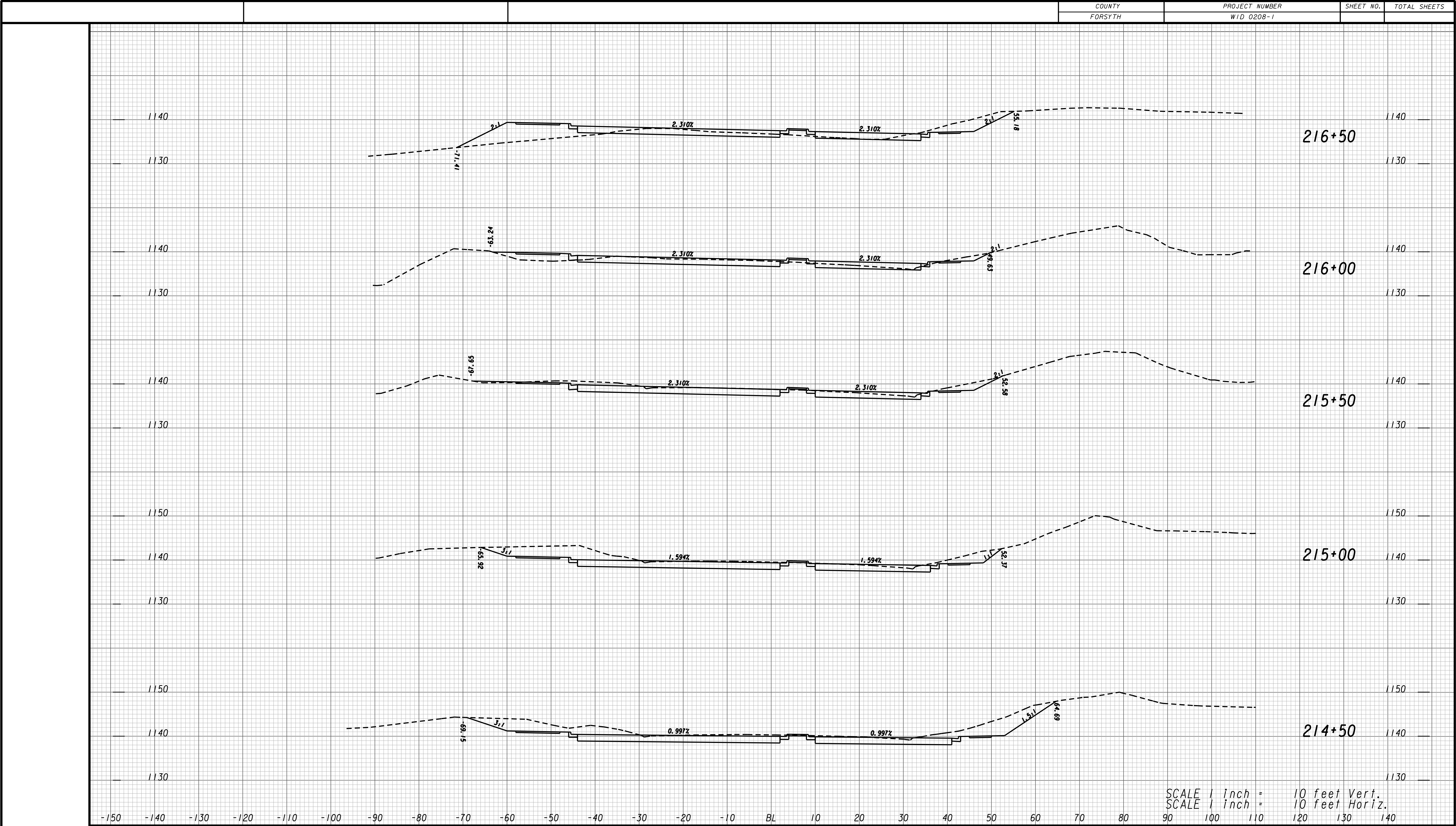




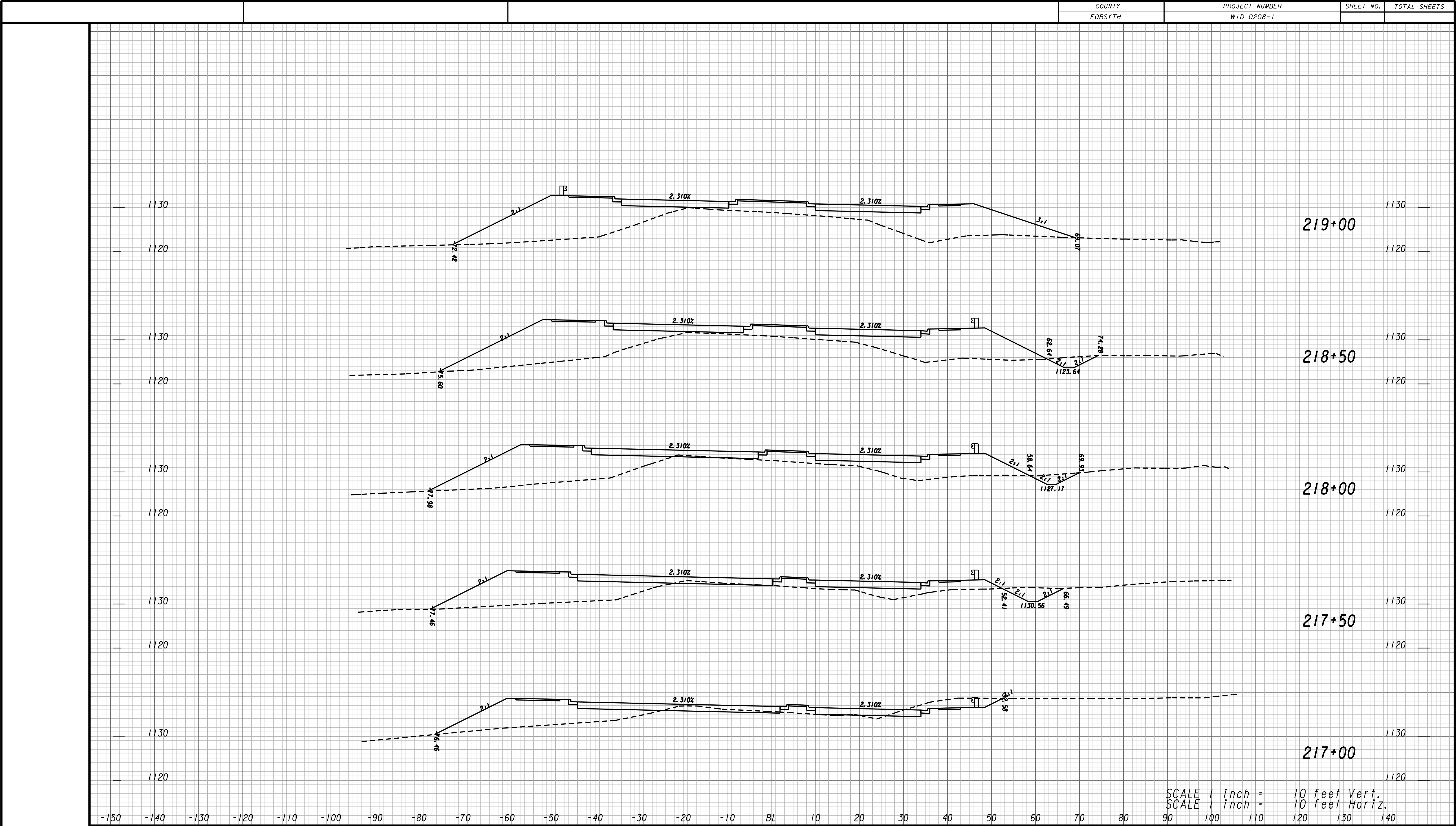








 GRESHAM SMITH AND PARTNERS		REVISION DATES			FORSYTH COUNTY ENGINEERING DEPARTMENT OFFICE: ROAD DESIGN EARTHWORK CROSS SECTIONS WID 0208-1 (PHASE 5) FORSYTH COUNTY	DRAWING No. 23-15



GRESHAM
SMITH AND
PARTNERS

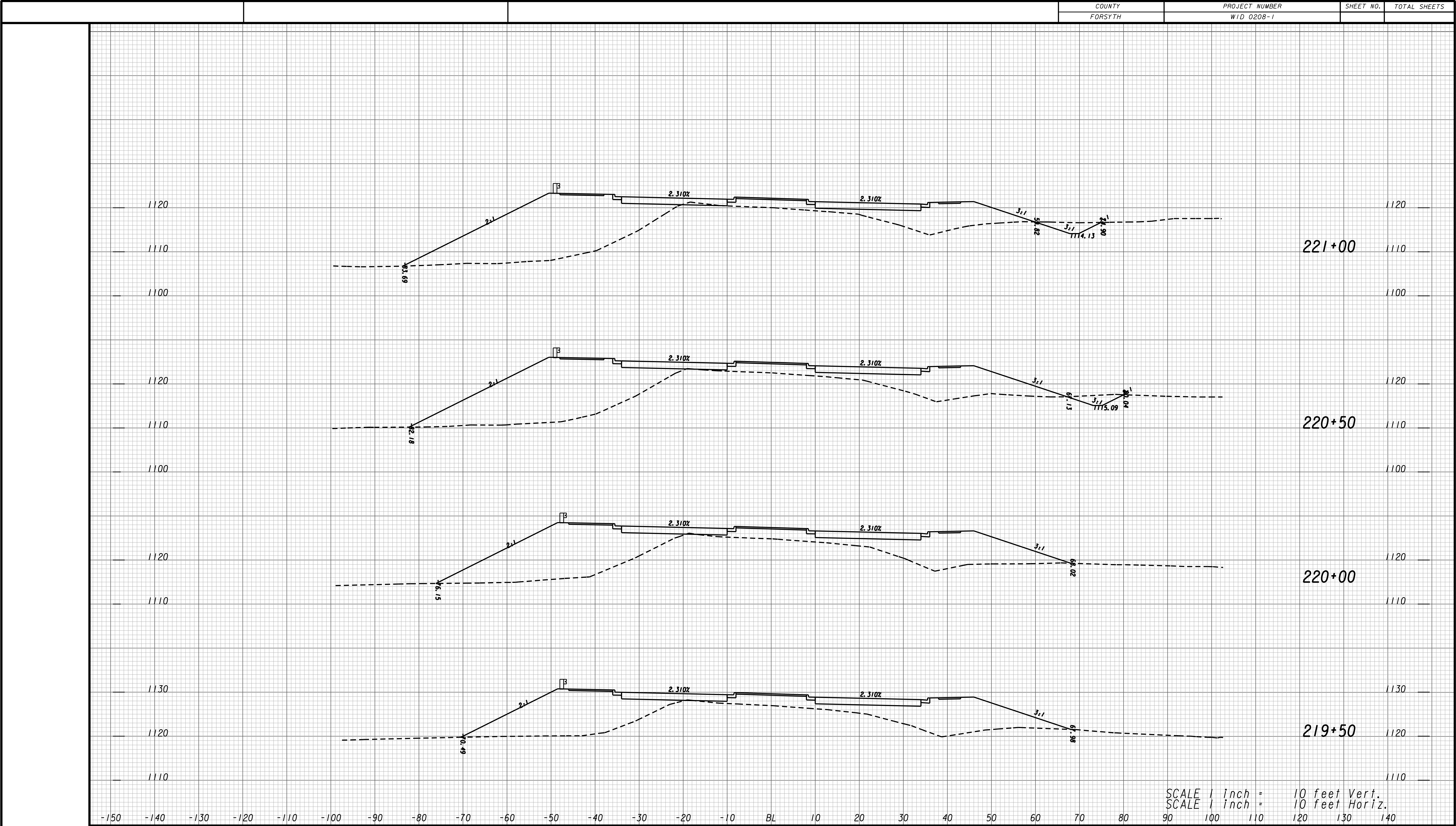
REVISION DATES

FORSYTH COUNTY
ENGINEERING DEPARTMENT
OFFICE: ROAD DESIGN

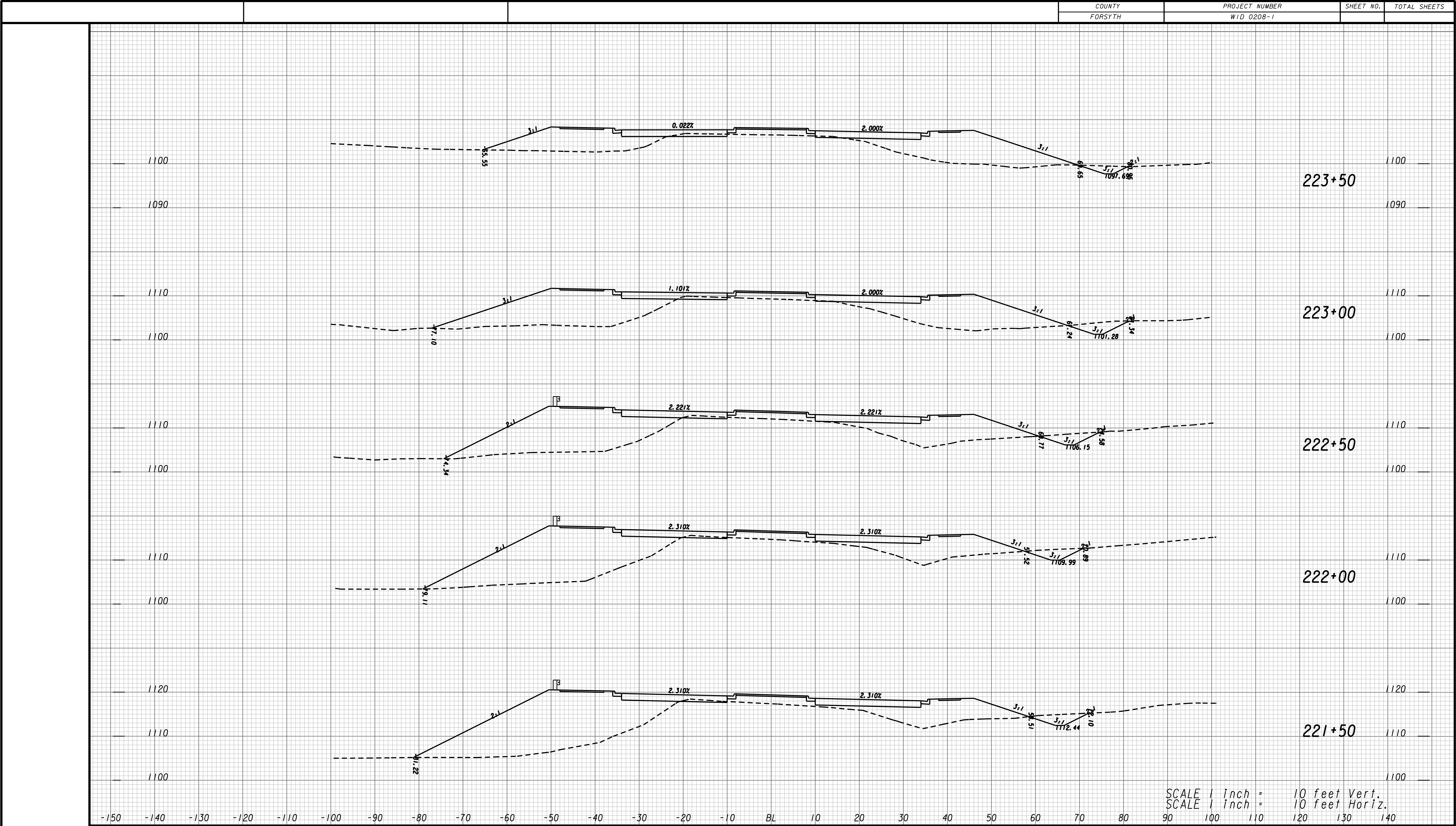
EARTHWORK CROSS SECTIONS

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

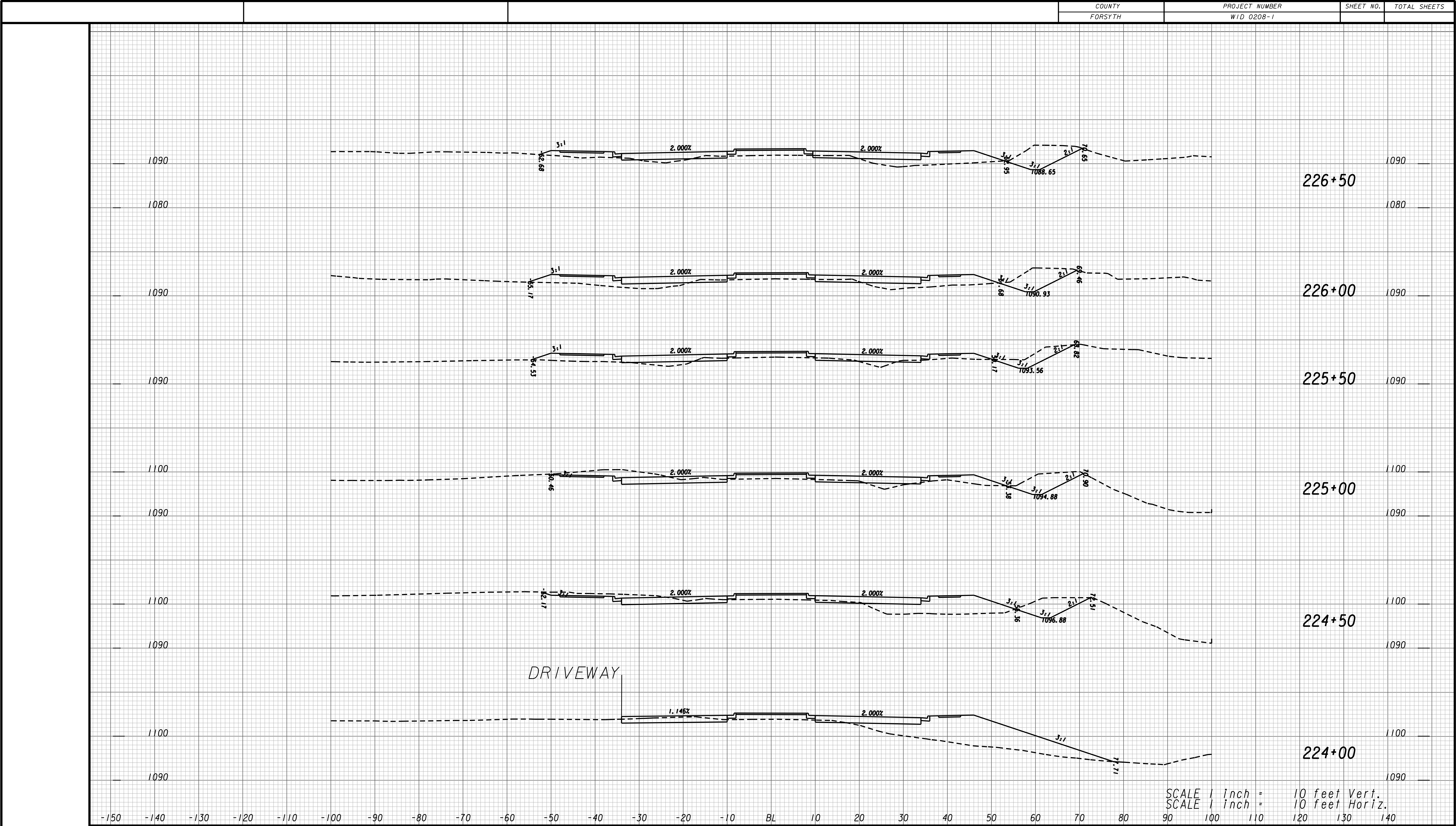
DRAWING No.
23-16



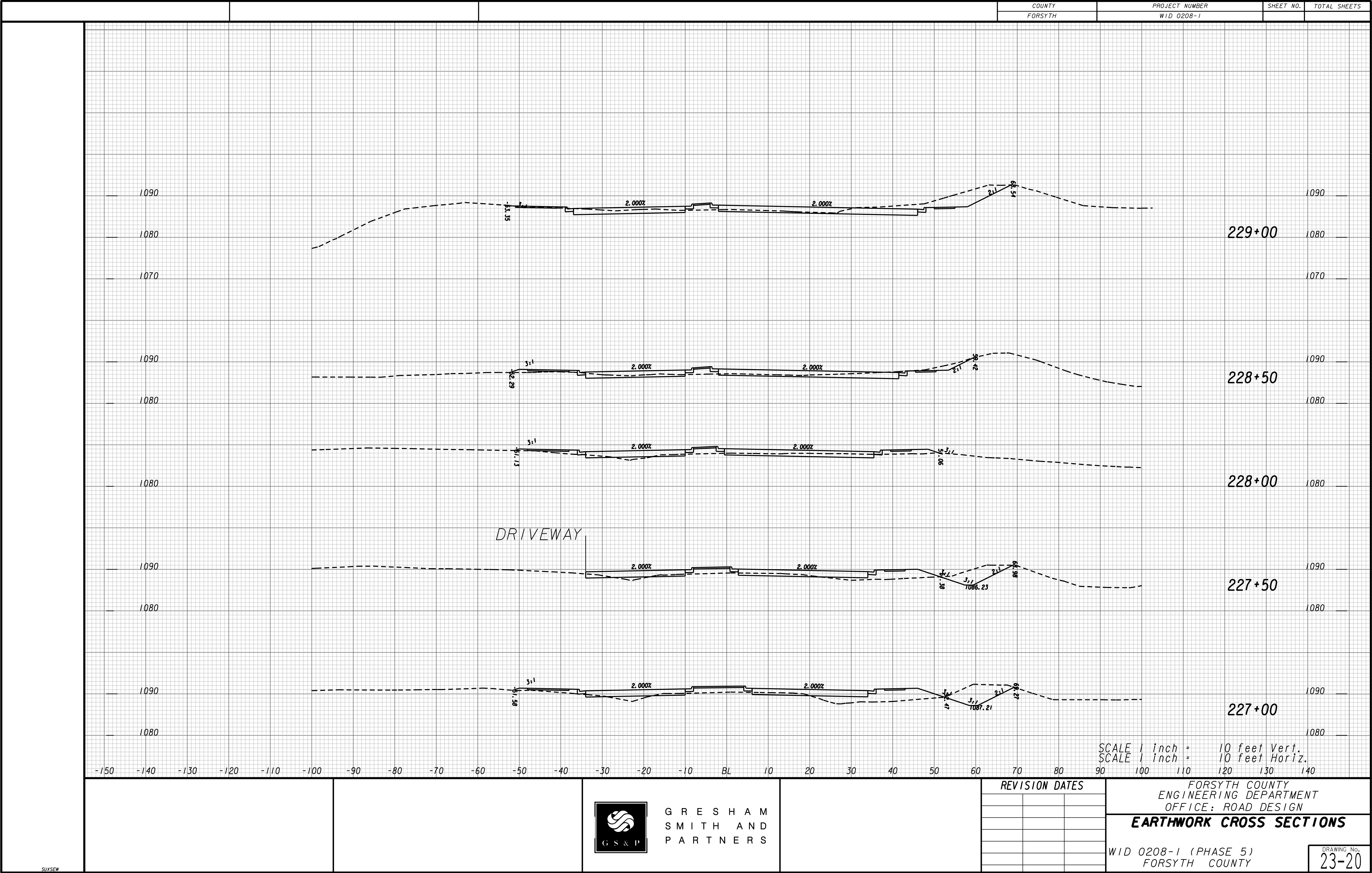
 GRESHAM SMITH AND PARTNERS		REVISION DATES			<div style="text-align: center;">FORSYTH COUNTY ENGINEERING DEPARTMENT OFFICE: ROAD DESIGN</div> <div style="text-align: center;">EARTHWORK CROSS SECTIONS</div>	
					<div>WID 0208-1 (PHASE 5) FORSYTH COUNTY</div> <div style="border: 1px solid black; padding: 2px; display: inline-block;">DRAWING No. 23-17</div>	

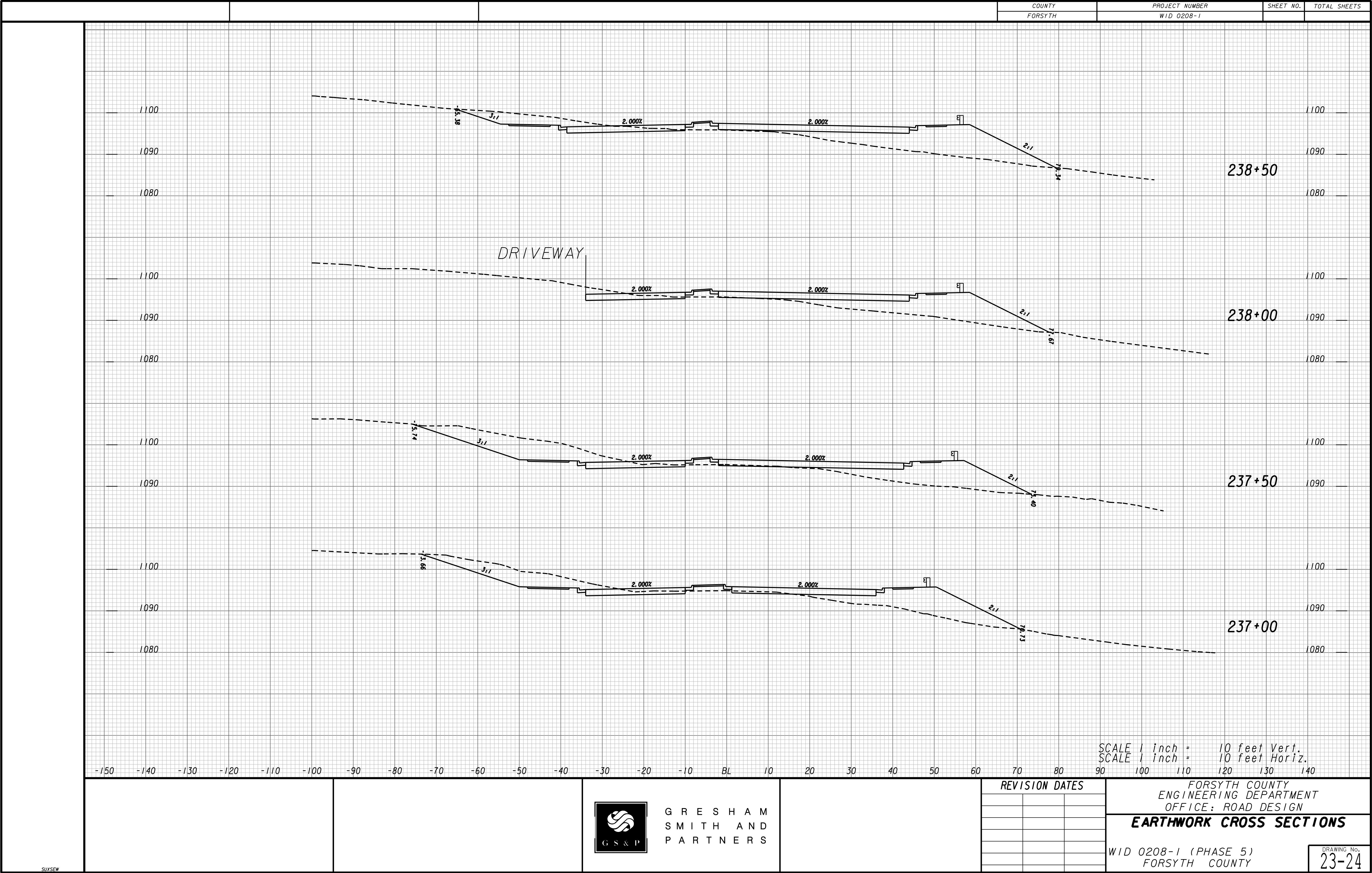


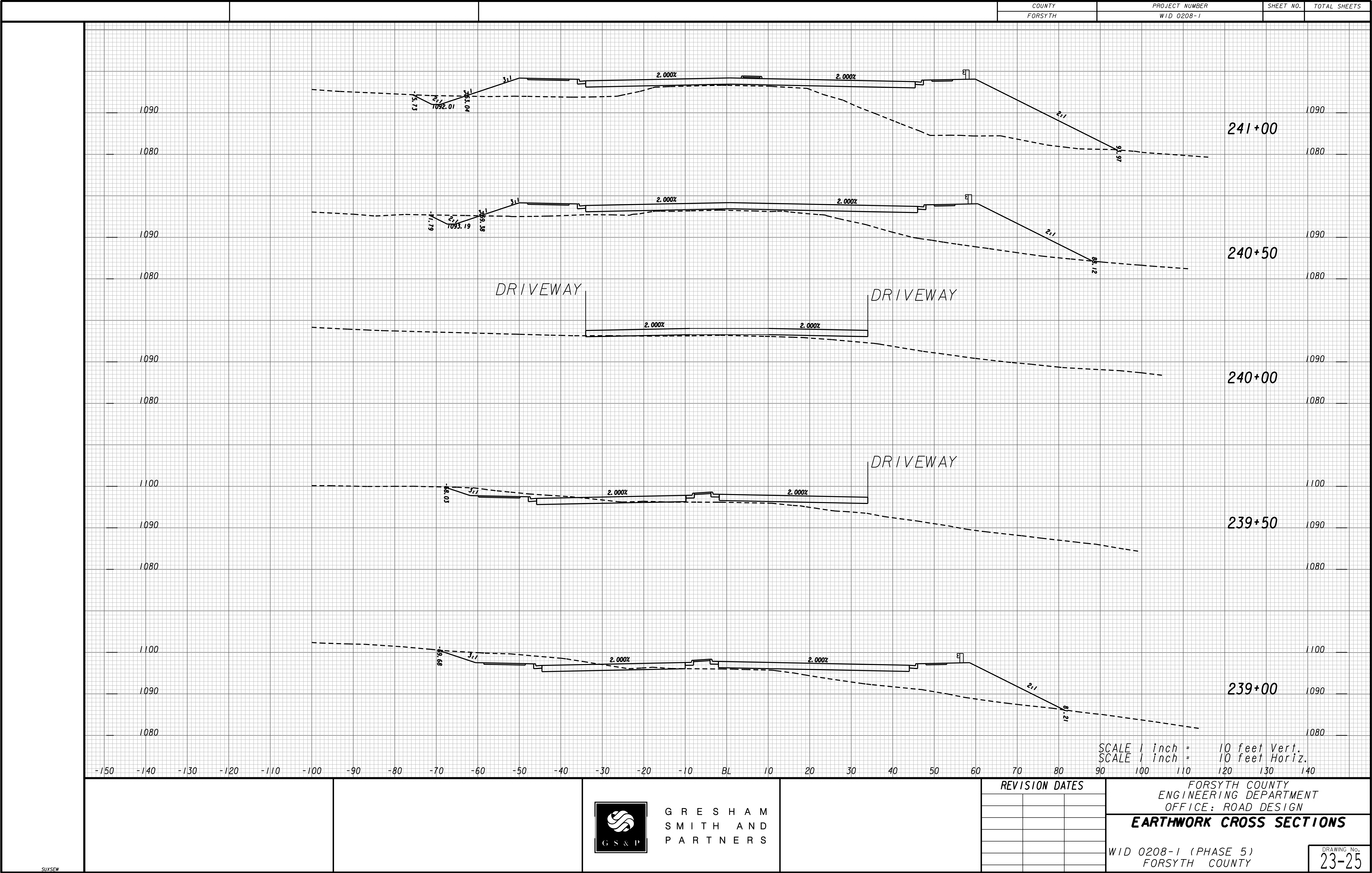
 G S & P	G R E S H A M S M I T H A N D P A R T N E R S	REVISION DATES			<div style="text-align: right;">FORSYTH COUNTY ENGINEERING DEPARTMENT OFFICE: ROAD DESIGN</div> <div style="text-align: center;">EARTHWORK CROSS SECTIONS</div>	
					<div style="text-align: right;">WID 0208-1 (PHASE 5) FORSYTH COUNTY</div> <div style="text-align: right; border: 1px solid black; padding: 2px;">DRAWING No. 23-18</div>	



 GRESHAM SMITH AND PARTNERS		REVISION DATES			FORSYTH COUNTY ENGINEERING DEPARTMENT OFFICE: ROAD DESIGN	
					EARTHWORK CROSS SECTIONS	
WID 0208-1 (PHASE 5) FORSYTH COUNTY				DRAWING No. 23-19		







GRESHAM
SMITH AND
PARTNERS

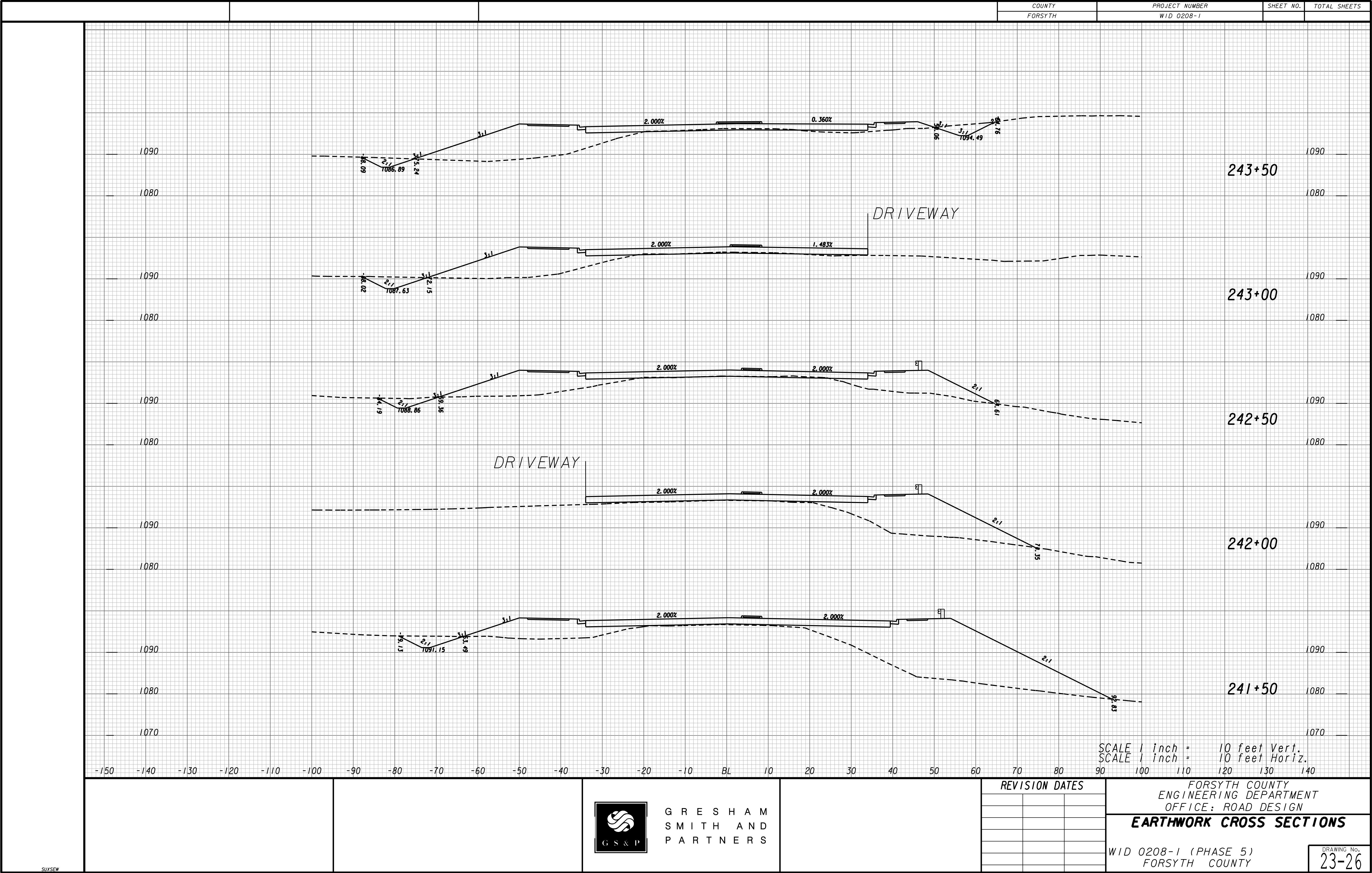
REVISION DATES

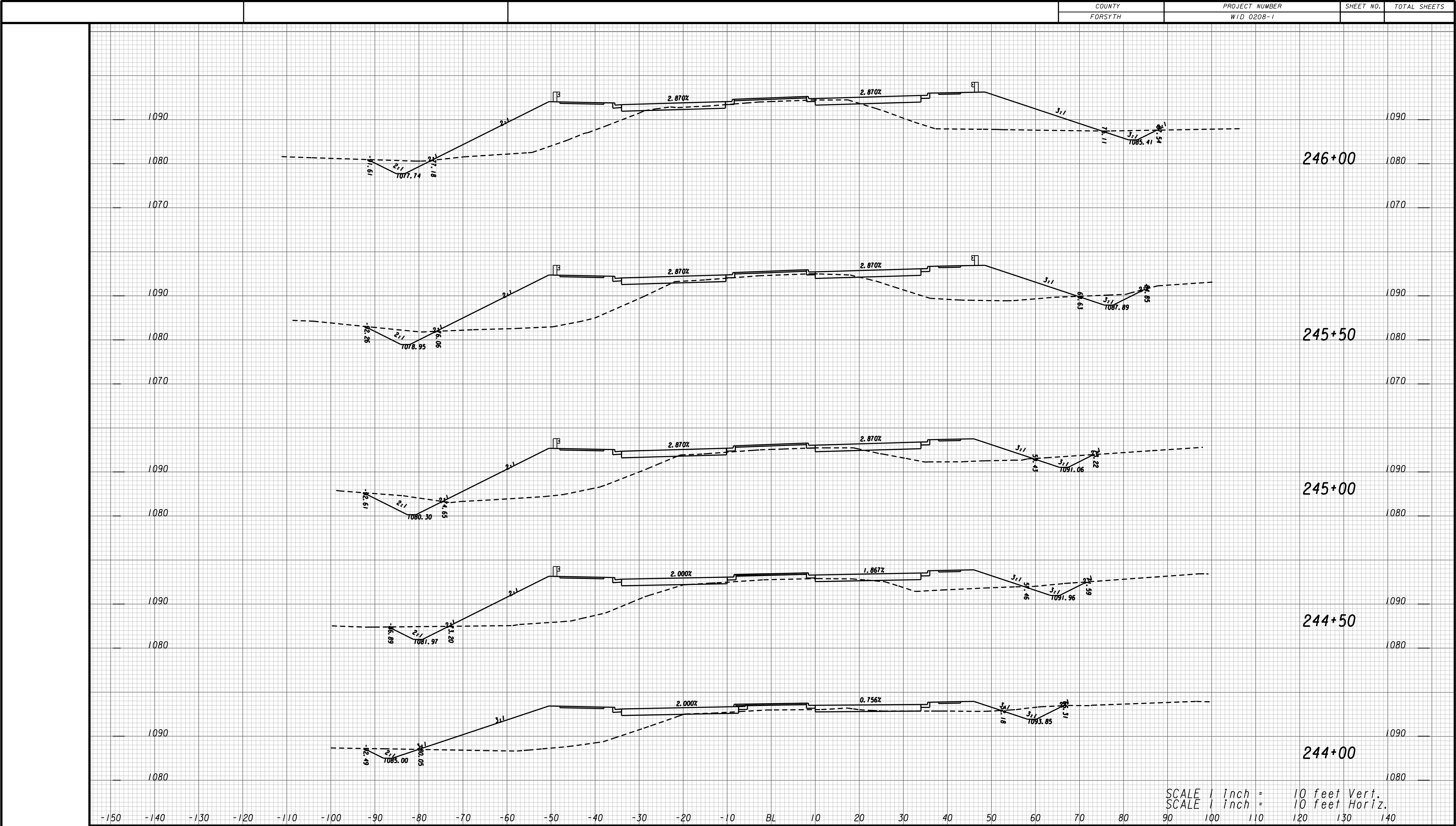
FORSYTH COUNTY
ENGINEERING DEPARTMENT
OFFICE: ROAD DESIGN

EARTHWORK CROSS SECTIONS

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
23-25





SCALE 1 inch = 10 feet Vert.
SCALE 1 inch = 10 feet Horiz.

REVISION DATES

FORSYTH COUNTY
ENGINEERING DEPARTMENT
OFFICE: ROAD DESIGN

EARTHWORK CROSS SECTIONS

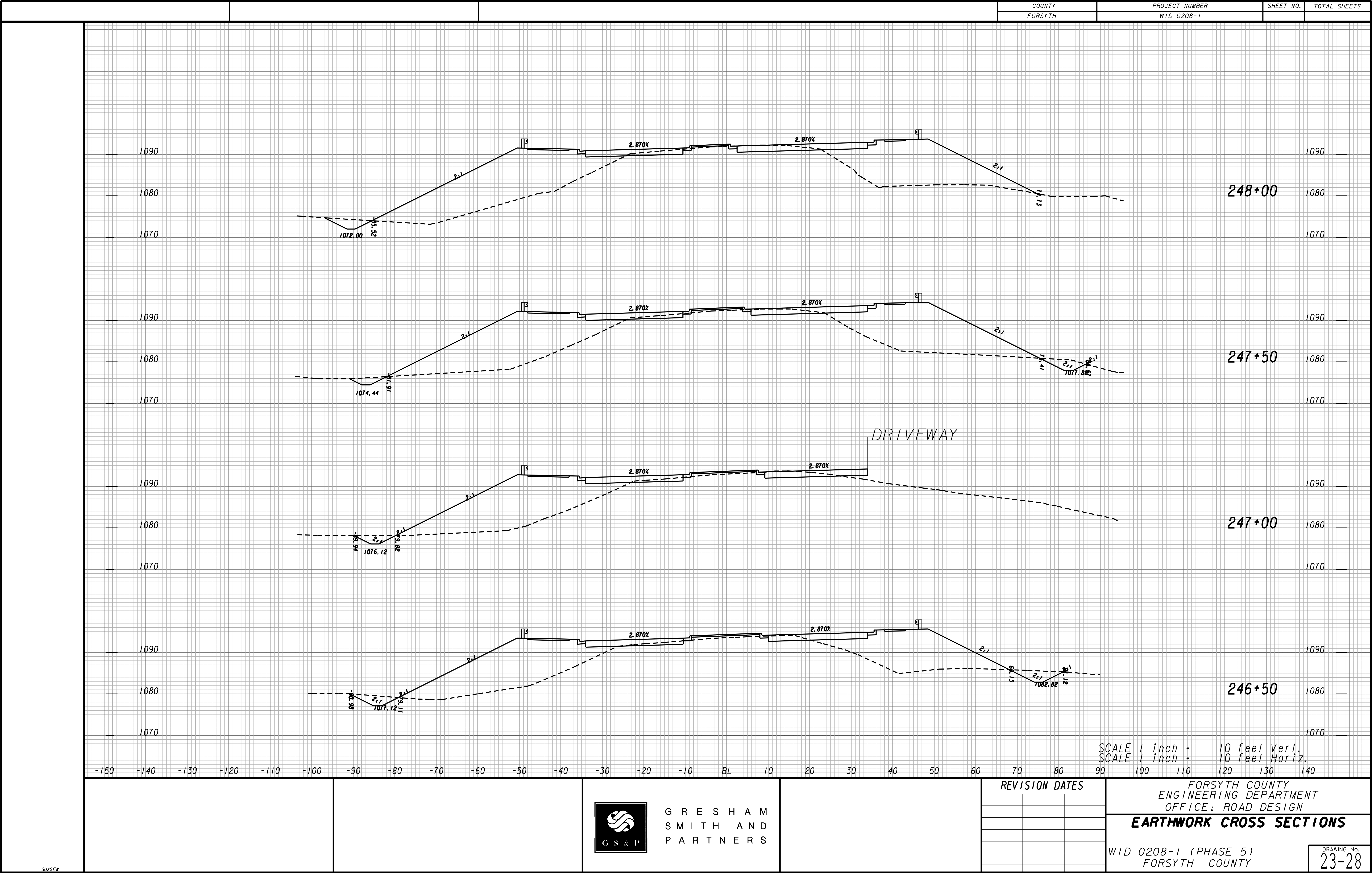
WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.

23-27



G R E S H A M
S M I T H A N D
P A R T N E R S



G R E S H A M
S M I T H A N D
P A R T N E R S

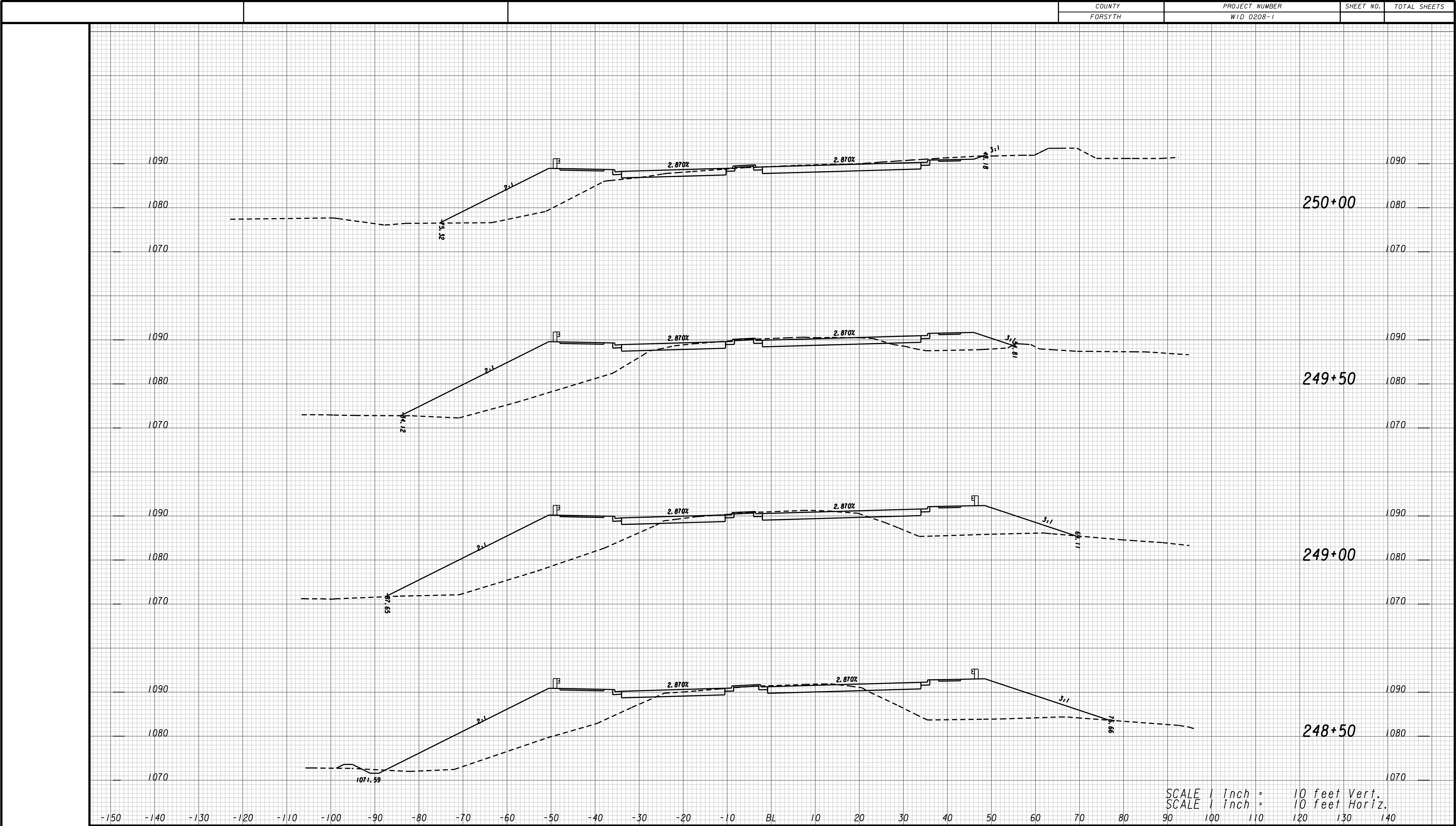
REVISION DATES

FORSYTH COUNTY
ENGINEERING DEPARTMENT
OFFICE: ROAD DESIGN

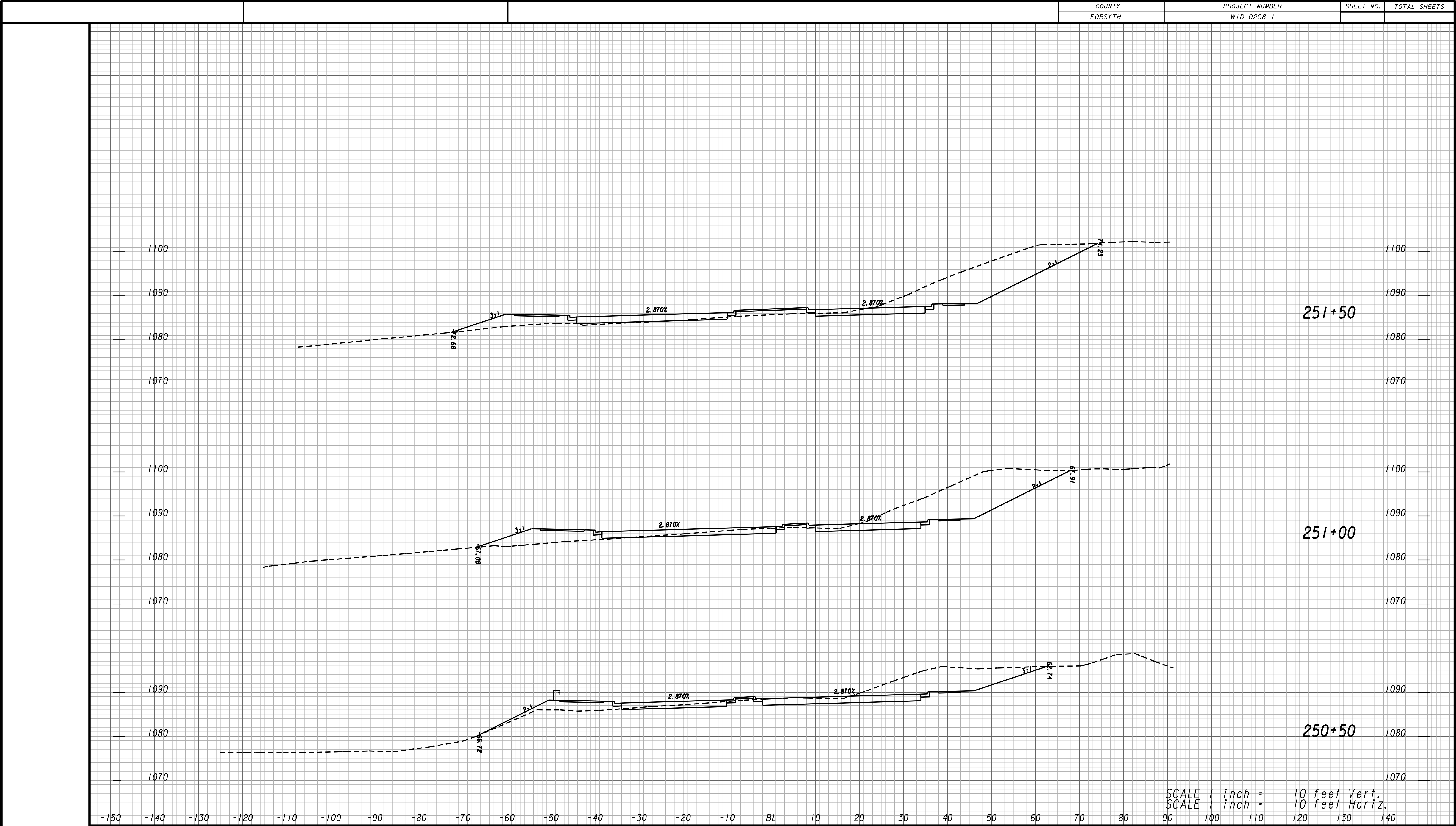
EARTHWORK CROSS SECTIONS

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

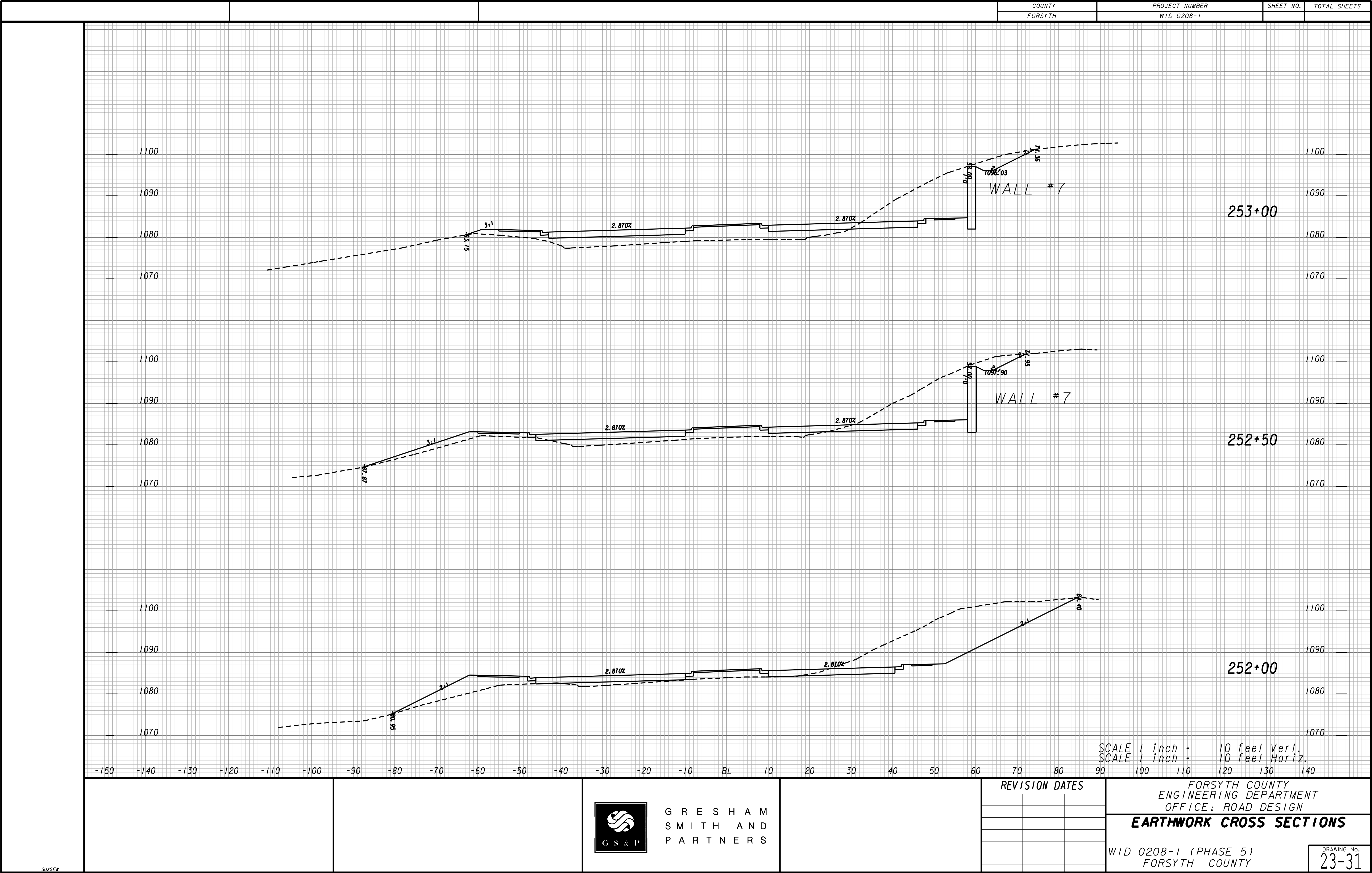
DRAWING No.
23-28

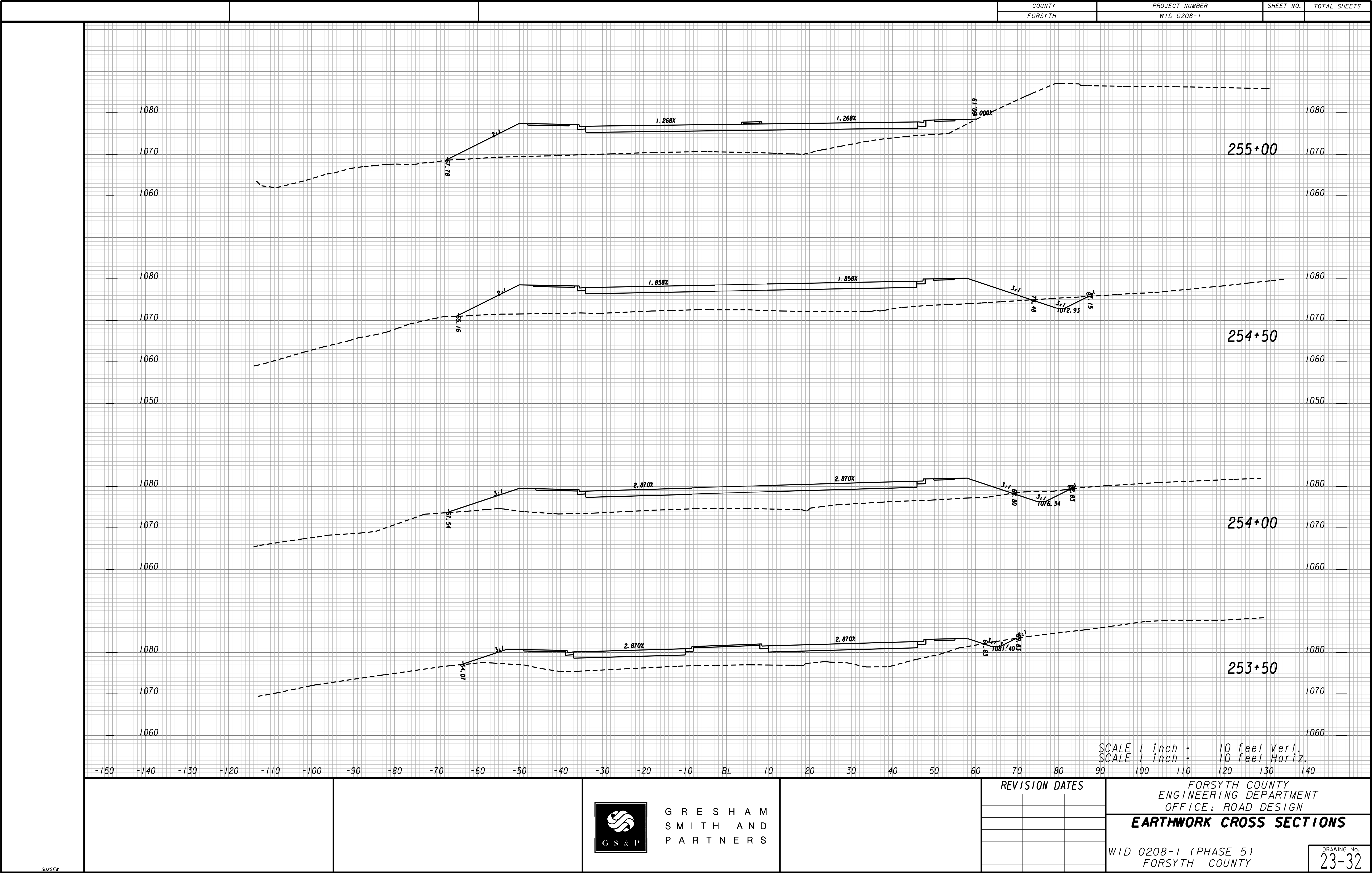


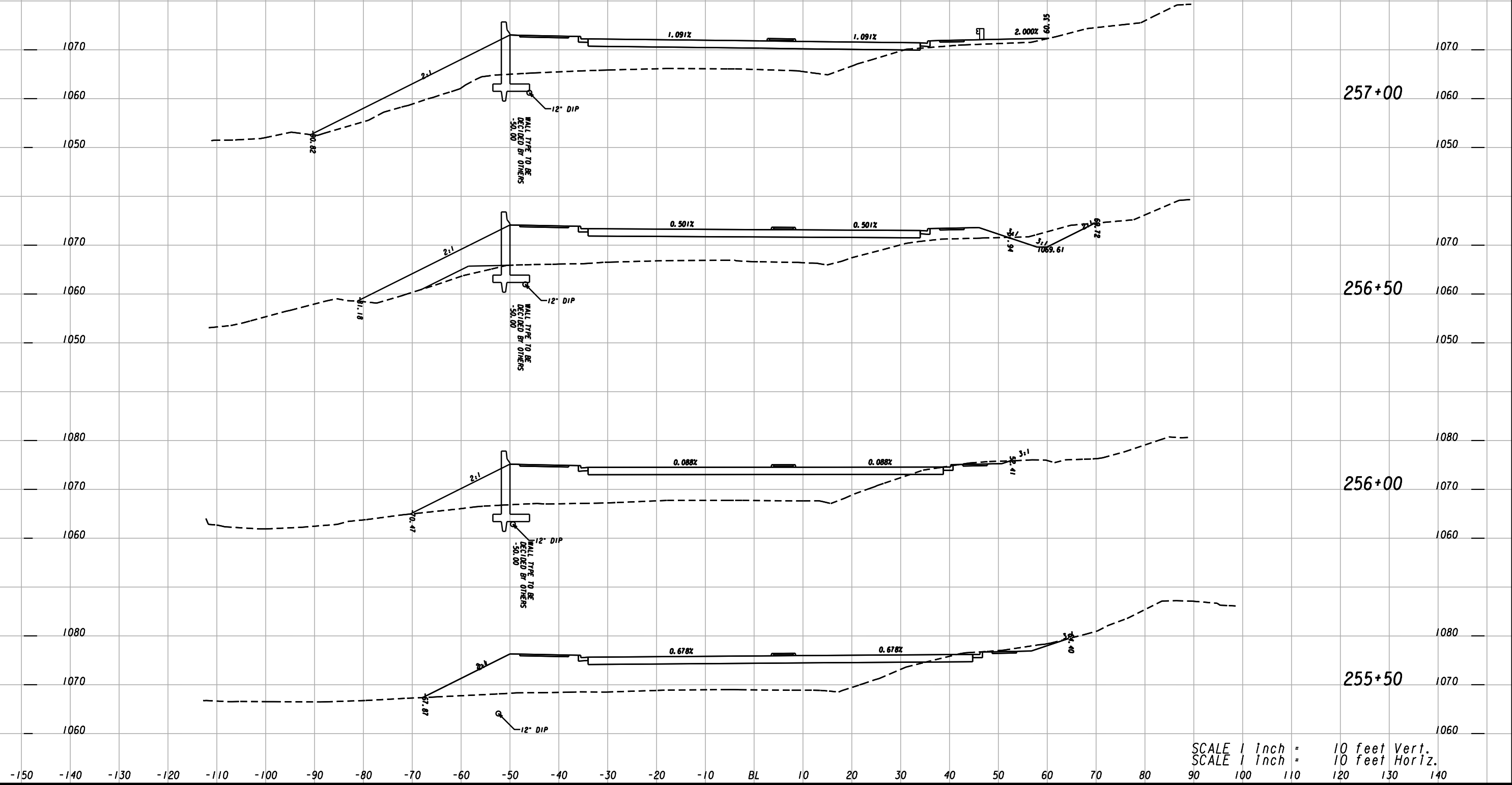
 G S & P	G R E S H A M S M I T H A N D P A R T N E R S		REVISION DATES			FORSYTH COUNTY ENGINEERING DEPARTMENT OFFICE: ROAD DESIGN EARTHWORK CROSS SECTIONS WID 0208-1 (PHASE 5) FORSYTH COUNTY	DRAWING No. 23-29



 GRESHAM SMITH AND PARTNERS		REVISION DATES			FORSYTH COUNTY ENGINEERING DEPARTMENT OFFICE: ROAD DESIGN EARTHWORK CROSS SECTIONS WID 0208-1 (PHASE 5) FORSYTH COUNTY	DRAWING No. 23-30







SCALE 1 inch = 10 feet Vert.
SCALE 1 inch = 10 feet Horiz.



GRESHAM
SMITH AND
PARTNERS

REVISION DATES

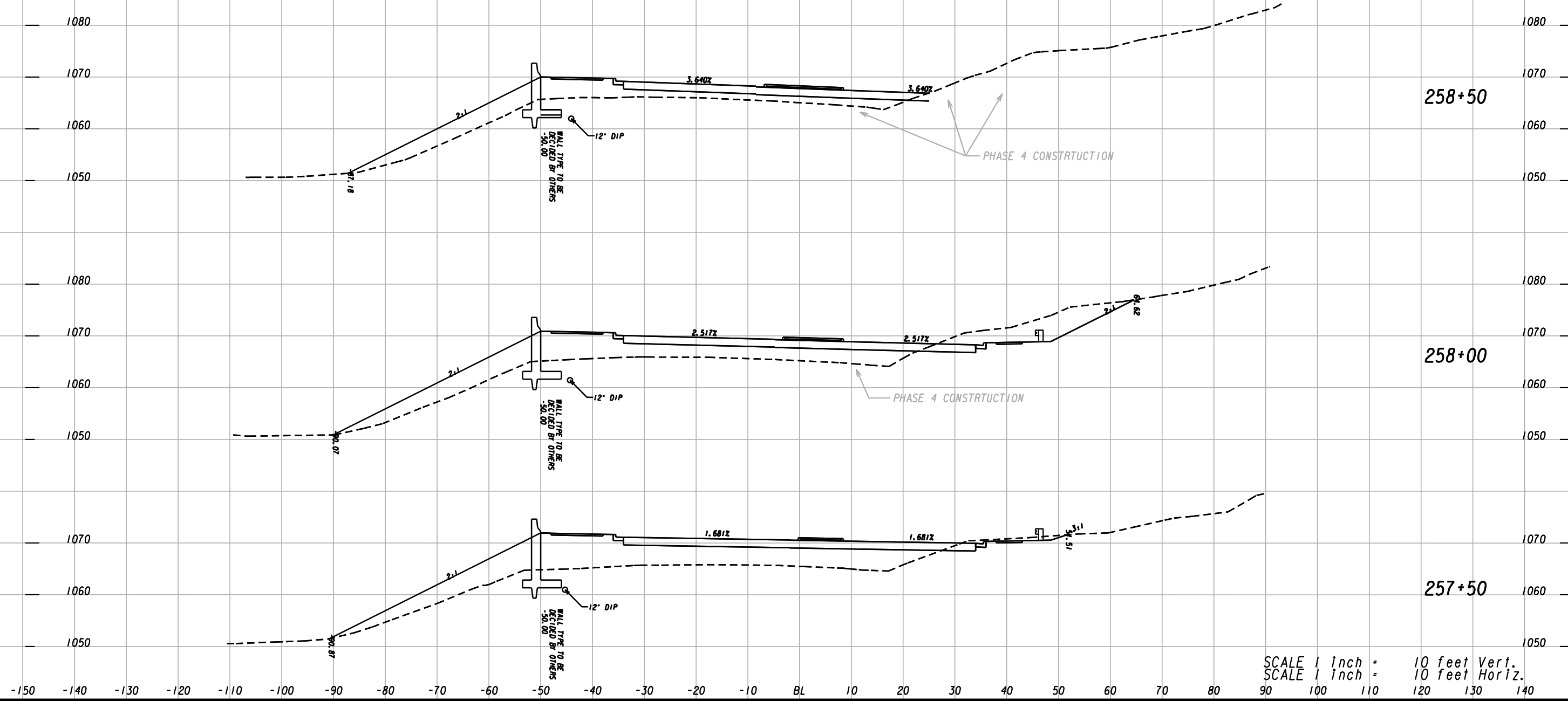
4-17-20		

FORSYTH COUNTY
ENGINEERING DEPARTMENT
OFFICE: ROAD DESIGN

EARTHWORK CROSS SECTIONS

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
23-33



SCALE 1 inch = 10 feet Vert.
SCALE 1 inch = 10 feet Horiz.



G R E S H A M
S M I T H A N D
P A R T N E R S

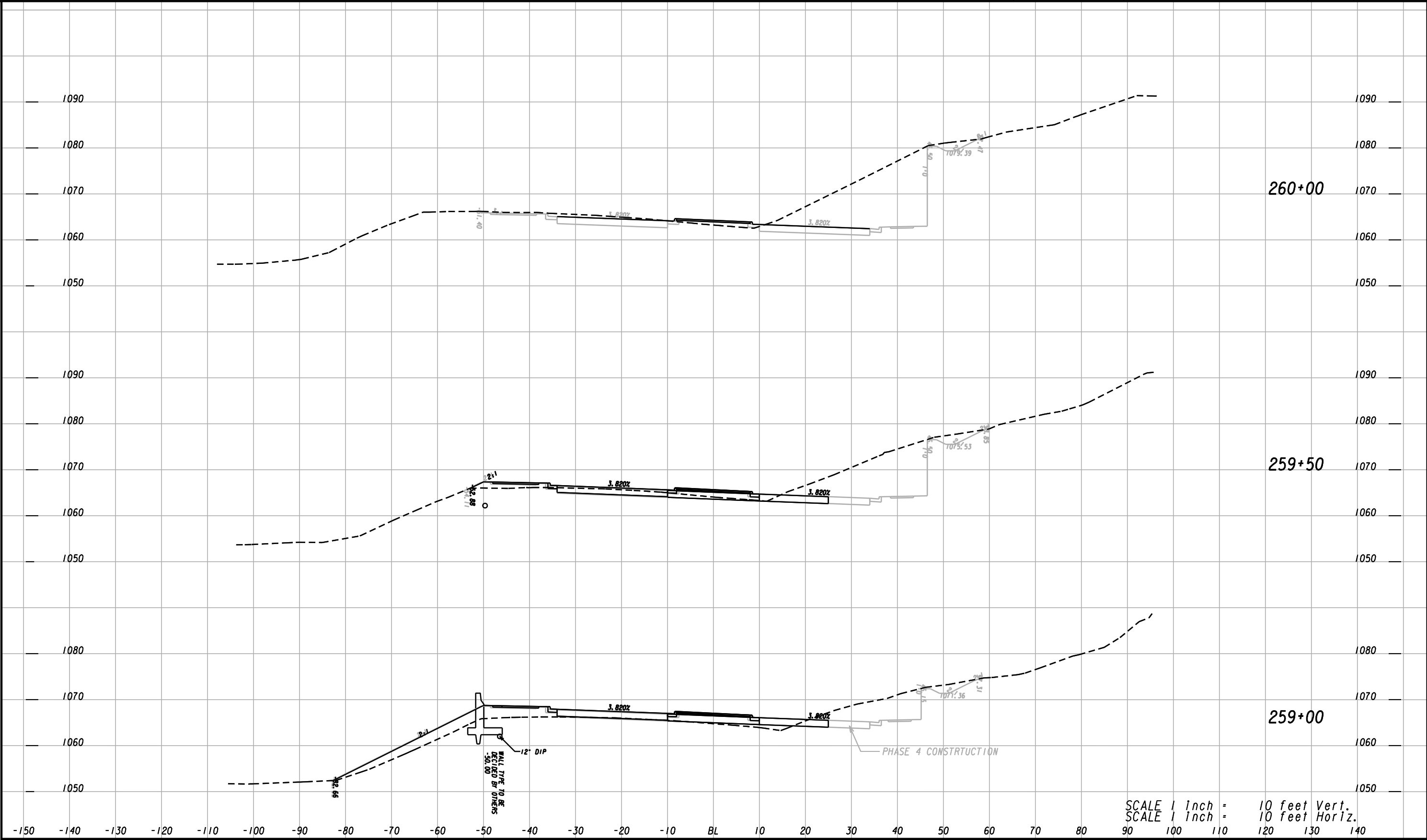
REVISION DATES		
4-17-20		

FORSYTH COUNTY
ENGINEERING DEPARTMENT
OFFICE: ROAD DESIGN

EARTHWORK CROSS SECTIONS

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
23-34



SCALE 1 inch = 10 feet Vert.
SCALE 1 inch = 10 feet Horiz.



G R E S H A M
S M I T H A N D
P A R T N E R S

REVISION DATES

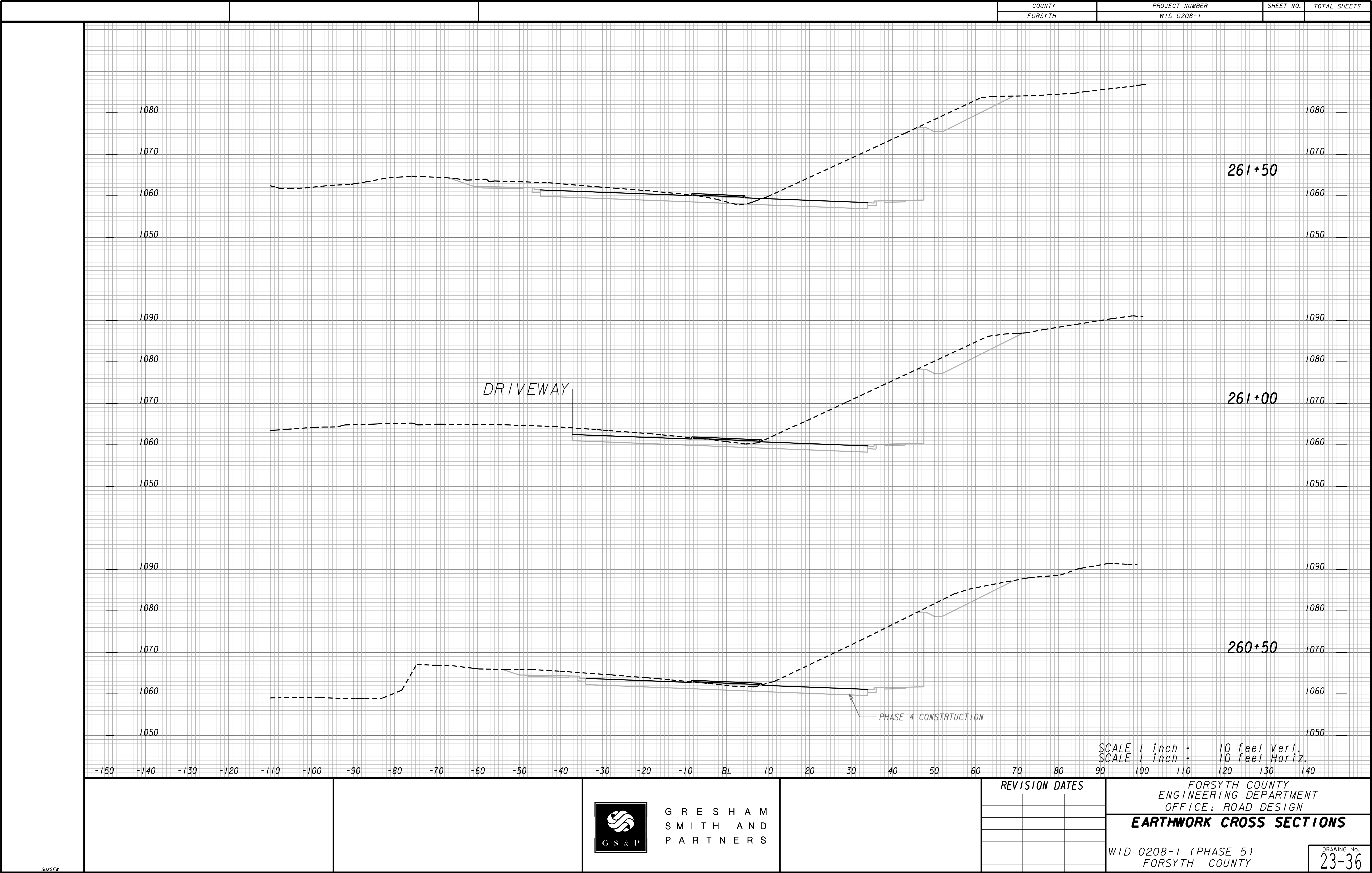
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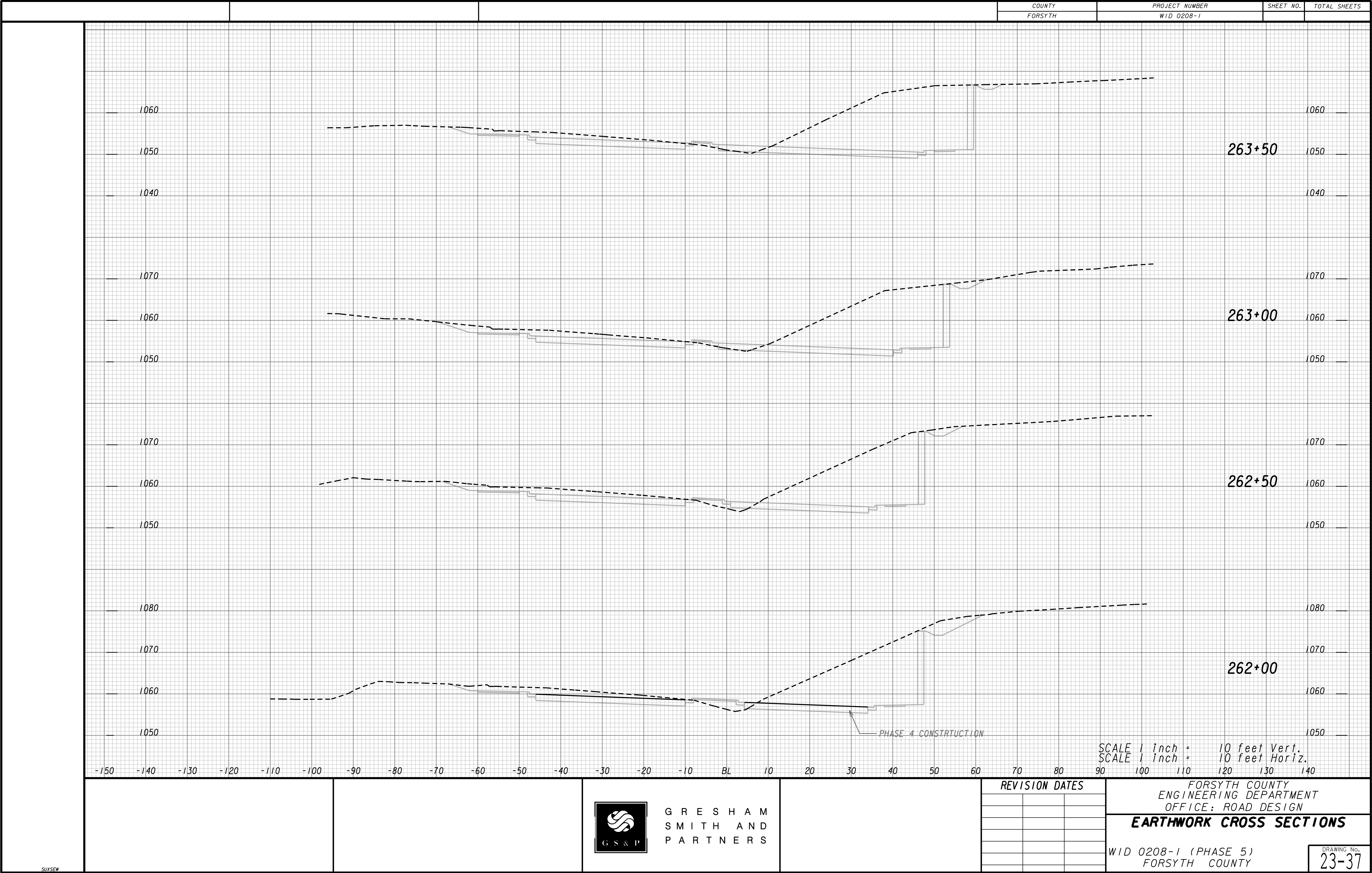
FORSYTH COUNTY
ENGINEERING DEPARTMENT
OFFICE: ROAD DESIGN

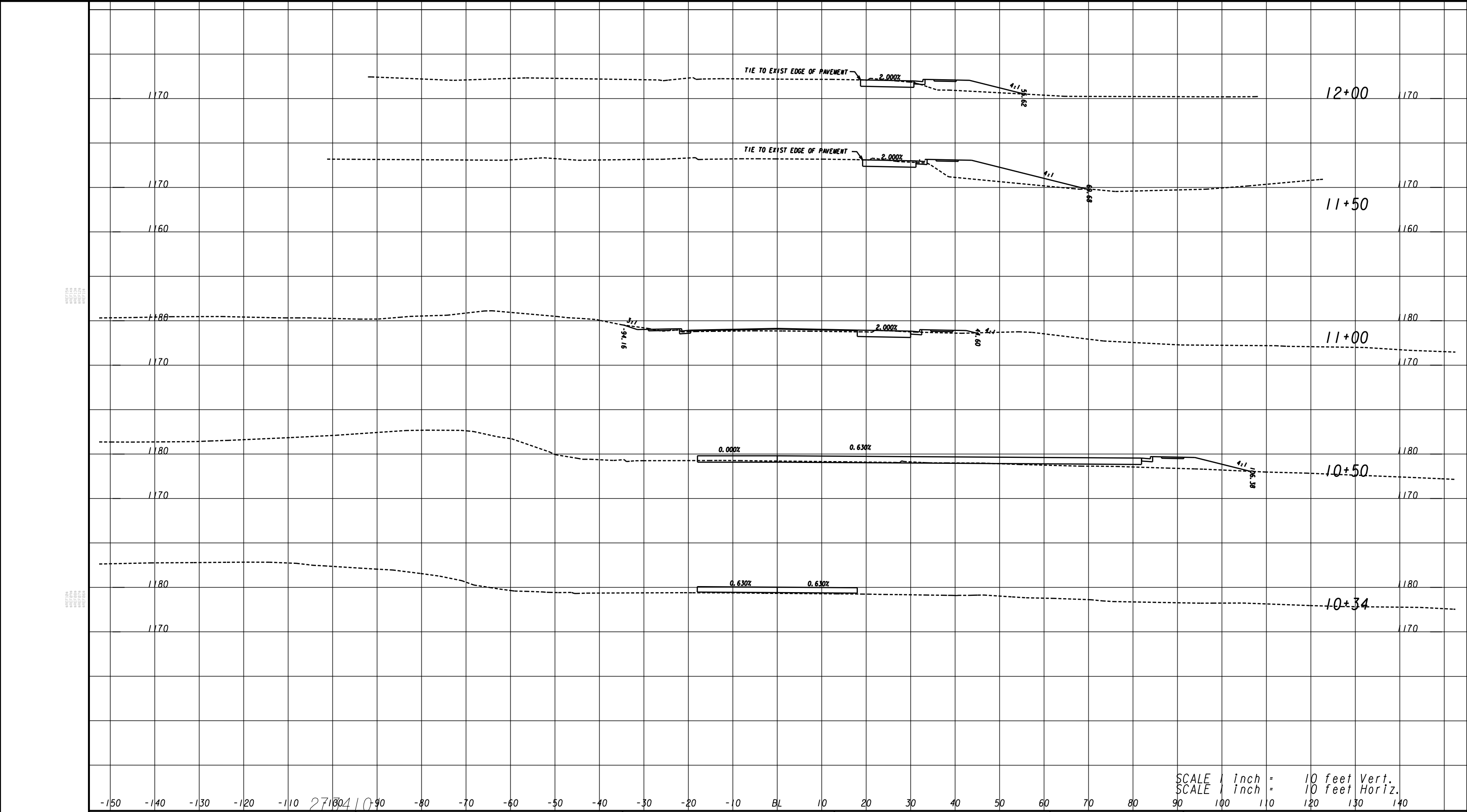
EARTHWORK CROSS SECTIONS

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
23-35







2734101

2734101

GRESHAM
SMITH AND
PARTNERS

REVISION DATES	
4-17-20	

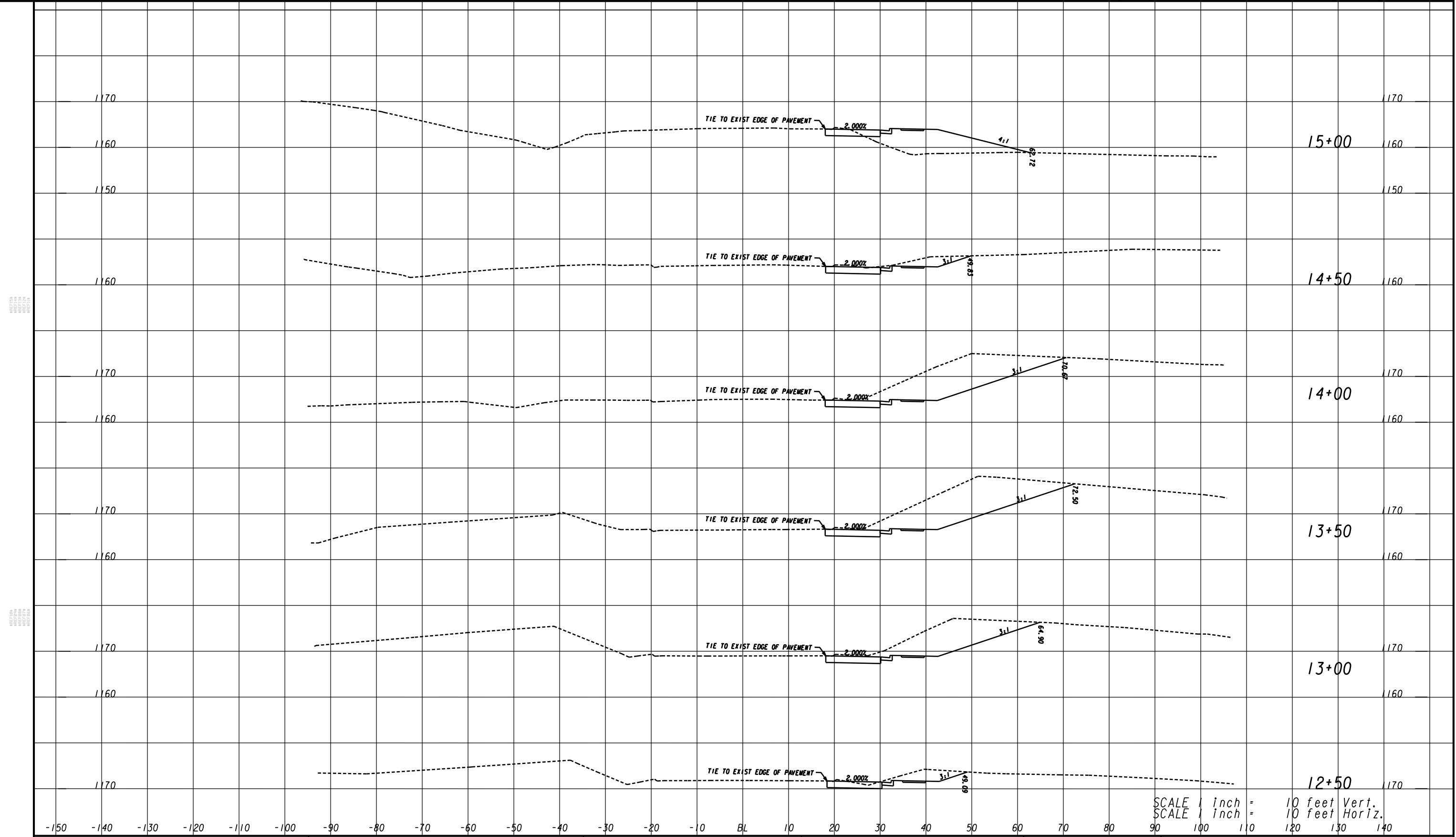
STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION

OFFICE:

CROSS SECTIONS
JAMES BURGESS ROAD

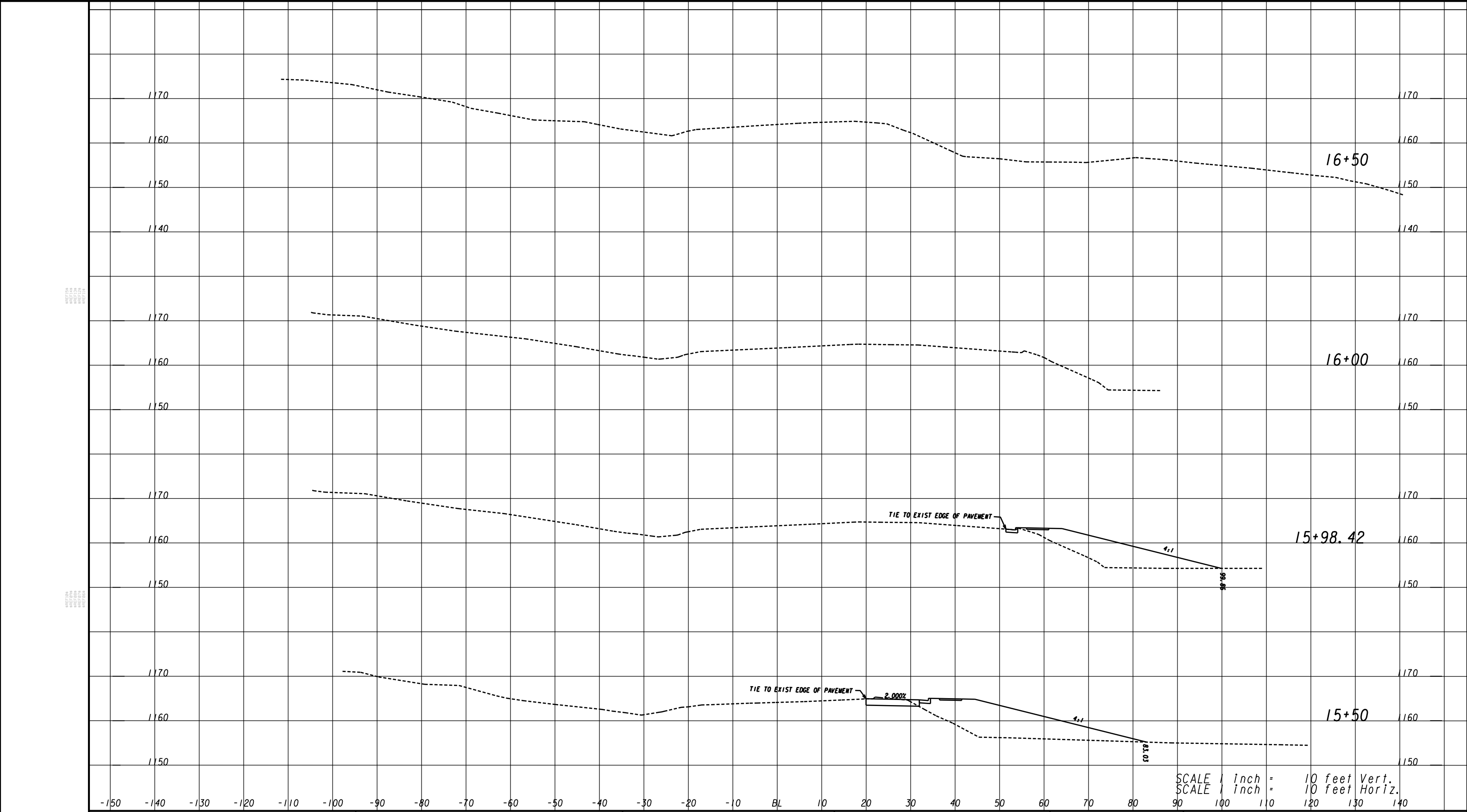
WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
23-38



SCALE	1 inch	=	10 feet	Vert.
SCALE	1 inch	=	10 feet	Horiz.

<div> <div>REVISION DATES</div> <div>4-17-20</div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> </div>			<div> <div>STATE OF GEORGIA</div> <div>DEPARTMENT OF TRANSPORTATION</div> <div>OFFICE:</div> <div>CROSS SECTIONS</div> <div>JAMES BURGESS ROAD</div> <div>WID 0208-1 (PHASE 5)</div> <div>FORSYTH COUNTY</div> <div> <div>DRAWING No.</div> <div>23-39</div> </div> </div>		
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2734101



GRESHAM
SMITH AND
PARTNERS

REVISION DATES	
4-17-20	

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE:
CROSS SECTIONS
JAMES BURGESS ROAD
WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
23-40

EXISTING OVERHEAD	OVERHEAD TO BE REMOVED	PROPOSED OVERHEAD	TYPE OF UTILITY
			ELECTRIC
			ELECTRIC/TELECOMMUNICATIONS
			ELECTRIC/CABLE TV
			ELECTRIC/TRAFFIC CONTROL
			ELECTRIC/TELECOMMUNICATIONS/CABLE TV
			ELECTRIC/TELECOMMUNICATIONS/CABLE TV/TRAFFIC CONTROL
			ELECTRIC/CABLE TV/TRAFFIC CONTROL
			ELECTRIC/TELECOMMUNICATIONS/TRAFFIC CONTROL
			GUY WIRE
			TELECOMMUNICATIONS
			TELECOMMUNICATIONS/TRAFFIC CONTROL
			TELECOMMUNICATIONS/CABLE TV/TRAFFIC CONTROL
			TELECOMMUNICATIONS/CABLE TV
			CABLE TV
			CABLE TV/TRAFFIC CONTROL
			TRAFFIC CONTROL
			ELECTRIC (OL-D)
			ELECTRIC (OL-C)
			ELECTRIC (OL-B)
			TELECOMMUNICATIONS (OL-D)
			TELECOMMUNICATIONS (OL-C)
			TELECOMMUNICATIONS (OL-B)
			CABLE TV (OL-D)
			CABLE TV (OL-C)
			CABLE TV (OL-B)
			WATER (OL-D)
			WATER (OL-C)
			WATER (OL-B)
			WATER FOR LABELED PIPE SIZES (OL-D)
			WATER FOR LABELED PIPE SIZES (OL-C)
			WATER FOR LABELED PIPE SIZES (OL-B)
			NON-POTABLE WATER (OL-D)
			NON-POTABLE WATER (OL-C)
			NON-POTABLE WATER (OL-B)
			NON-POTABLE WATER FOR LABELED PIPE SIZES (OL-D)
			NON-POTABLE WATER FOR LABELED PIPE SIZES (OL-C)
			NON-POTABLE WATER FOR LABELED PIPE SIZES (OL-B)
			STEAM (OL-D)
			STEAM (OL-C)
			STEAM (OL-B)
			STEAM FOR LABELED PIPE SIZES (OL-D)
			STEAM FOR LABELED PIPE SIZES (OL-C)
			STEAM FOR LABELED PIPE SIZES (OL-B)
			SANITARY SEWER WITH FLOW DIRECTION (OL-D)
			SANITARY SEWER WITH FLOW DIRECTION (OL-C)
			SANITARY SEWER WITH FLOW DIRECTION (OL-B)
			SANITARY SEWER WITH FLOW DIRECTION FOR LABELED PIPE SIZES (OL-D)
			SANITARY SEWER WITH FLOW DIRECTION FOR LABELED PIPE SIZES (OL-C)
			SANITARY SEWER WITH FLOW DIRECTION FOR LABELED PIPE SIZES (OL-B)
			SANITARY SEWER FORCE MAIN WITH FLOW DIRECTION (OL-D)
			SANITARY SEWER FORCE MAIN WITH FLOW DIRECTION (OL-C)
			SANITARY SEWER FORCE MAIN WITH FLOW DIRECTION (OL-B)
			GAS (OL-D)
			GAS (OL-C)
			GAS (OL-B)
			GAS FOR LABELED PIPE SIZES (OL-D)
			GAS FOR LABELED PIPE SIZES (OL-C)
			GAS FOR LABELED PIPE SIZES (OL-B)
			PETROLEUM (OL-D)
			PETROLEUM (OL-C)
			PETROLEUM (OL-B)
			PETROLEUM FOR LABELED PIPE SIZES (OL-D)
			PETROLEUM FOR LABELED PIPE SIZES (OL-C)
			PETROLEUM FOR LABELED PIPE SIZES (OL-B)
			TRAFFIC CONTROL (OL-D)
			TRAFFIC CONTROL (OL-C)
			TRAFFIC CONTROL (OL-B)
			UNKNOWN UTILITY FOUND IN SUE INVESTIGATION (OL-B)

UTILITY LEGEND

EXISTING	PROPOSED	TEMPORARY	EXISTING	PROPOSED	TEMPORARY

TELEPHONE PAIR SIZE TABLE

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

\$REF ID\$
\$REF ID\$
\$REF ID\$
\$REF ID\$

\$REF ID\$
\$REF ID\$
\$REF ID\$
\$REF ID\$

\$REF ID\$
\$REF ID\$
\$REF ID\$
\$REF ID\$

REVISION DATES

FORSYTH COUNTY
ENGINEERING DEPARTMENT

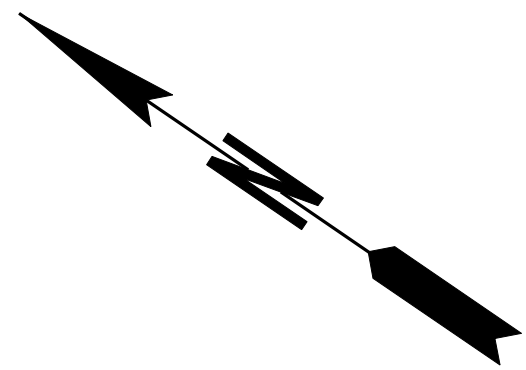
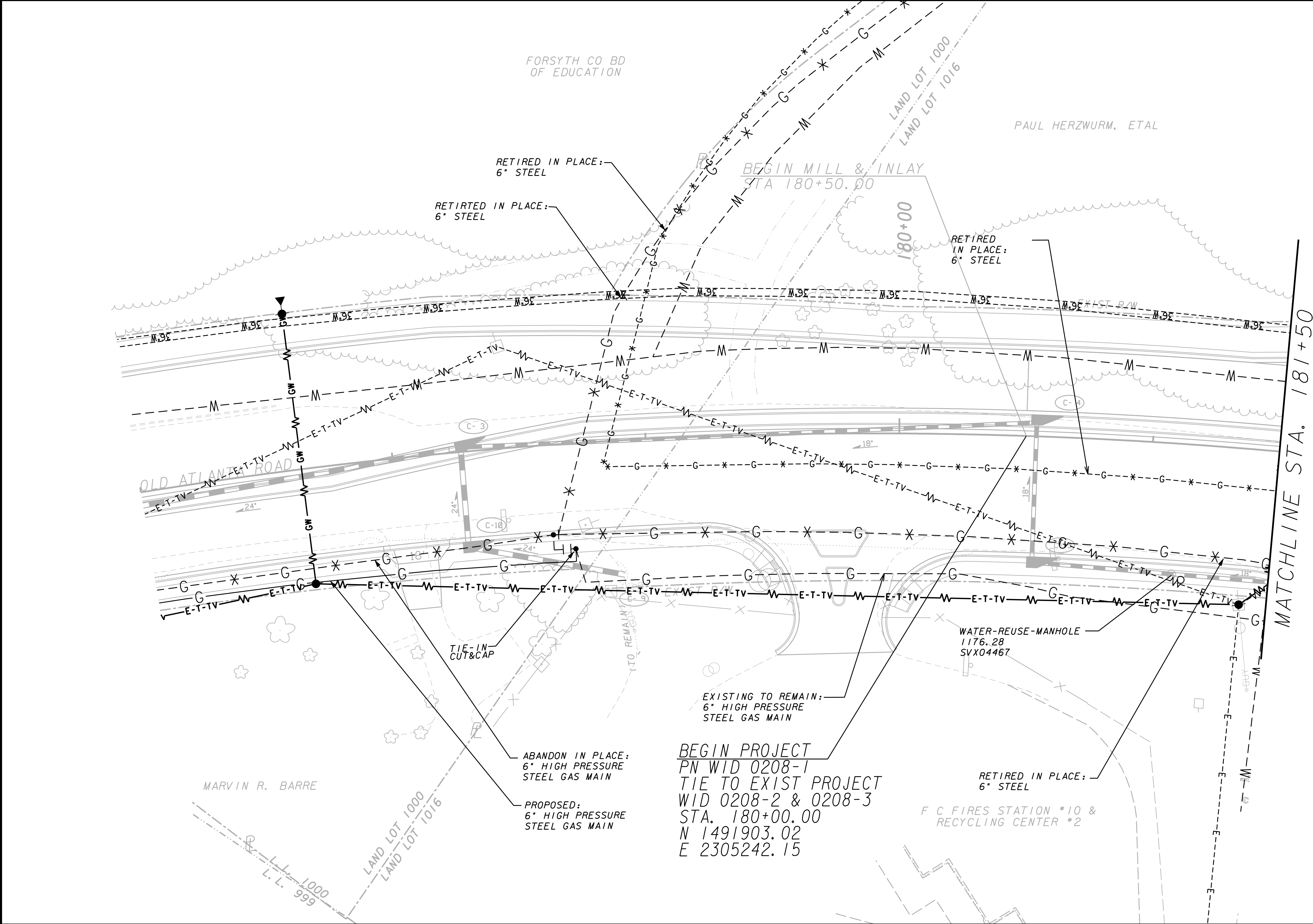
UTILITY PLANS

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
24-00



GRESHAM
SMITH AND
PARTNERS



EXISTING R/W & PROPERTY LINE
REQUIRED R/W LINE
CONSTRUCTION LIMITS
EASEMENT FOR CONSTRUCTION & MAINT. OF SLOPES & UTILITIES
EASEMENT FOR CONSTR OF SLOPES
EASEMENT FOR CONSTR OF DRIVES

.....BLA
.....ELA
LIMIT OF ACCESS
R/W AND LIMIT OF ACCESS

G R E S H A M
S M I T H
A N D
P A R T N E R S

SCALE IN FEET
0 20 40 80

REVISION DATES

FORSYTH COUNTY
ENGINEERING DEPARTMENT

UTILITY PLANS

WID 0208-2 & 0208-3
FORSYTH COUNTY

DRAWING No.
24-01

GPLN

OLD ATLANTA ROAD
STA. 183+62.19
FIRE STATION ACCESS ROAD
20+00.00
OLD ATLANTA ROAD
STA. 183+56.23 =
JAMES BURGESS ROAD
STA. 10+00.00

PAUL HERZWURM, ETAL

EXISTING TO REMAIN:
6" HIGH PRESSURE
STEEL GAS MAIN

REUSE-WATER MANHOLE
1184.28
SVX04620

POLE-ANCHOR-
GUY-WIRE-ANCHOR
1173.201
SVX012580

JAMES D. IRVIN

DOWLED CONCRETE MEDIAN
STA. 184+32 TO STA. 188+00

TRACT 1

12" DIP

CLASS B WIDENING

EXIST R/W

OLD ATLANTA ROAD

EXISTING TO REMAIN:
6" HIGH PRESSURE
STEEL GAS MAIN

CLASS B WIDENING

FULL DEPTH PAVEMENT

EXIST R/W

TRACT 1

JAMES D. IRVIN

EXISTING R/W & PROPERTY LINE
REQUIRED R/W LINE
CONSTRUCTION LIMITS
EASEMENT FOR CONSTRUCTION
& MAINT. OF SLOPES & UTILITIES
EASEMENT FOR CONSTR OF SLOPES
EASEMENT FOR CONSTR OF DRIVES

BEGIN LIMIT OF ACCESS
END LIMIT OF ACCESS
LIMIT OF ACCESS
R/W AND LIMIT OF ACCESS



G R E S H A M
S M I T H A N D
P A R T N E R S

SCALE IN FEET
0 20 40 80

REVISION DATES

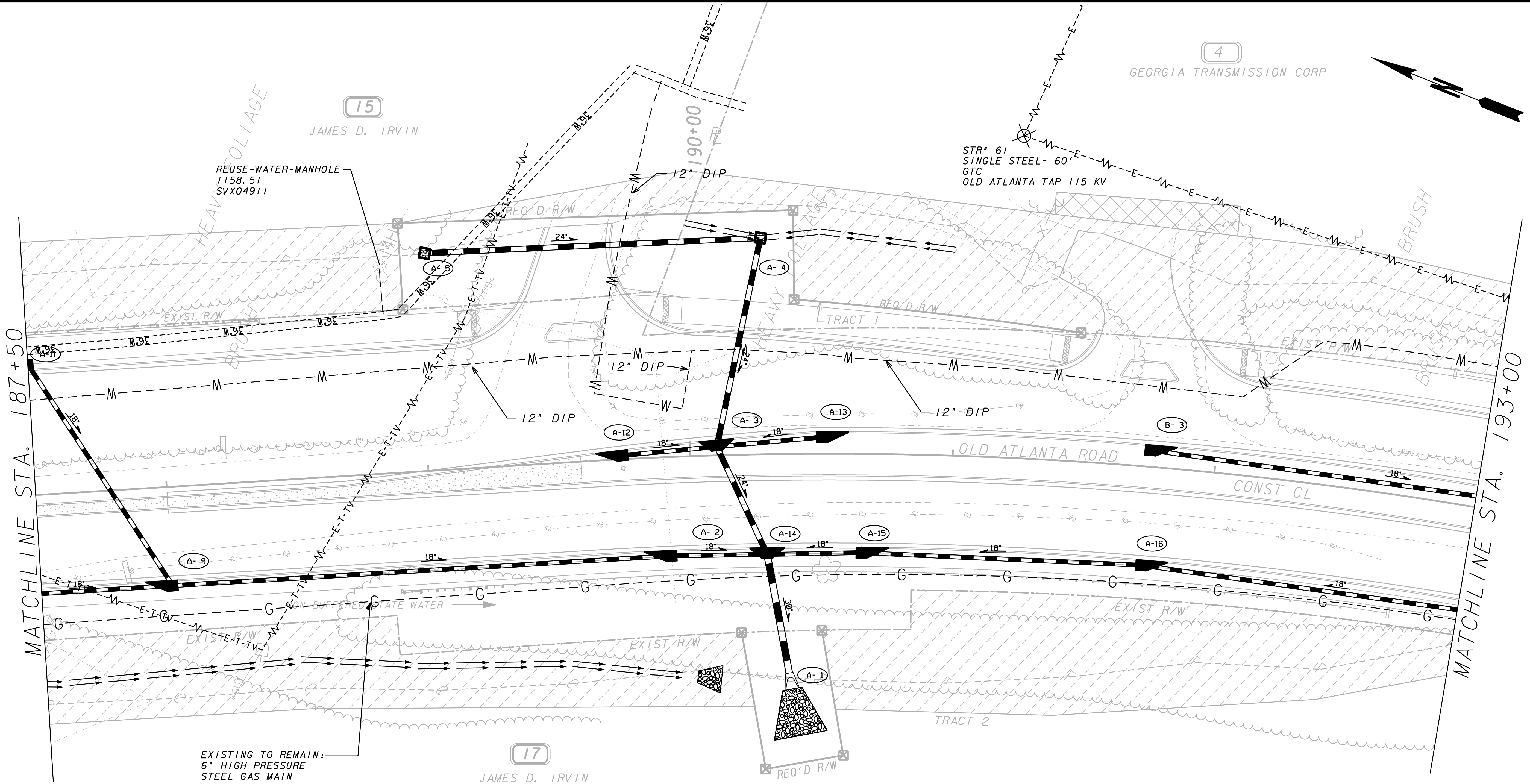
4-17-20		

FORSYTH COUNTY
ENGINEERING DEPARTMENT

UTILITY PLANS

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
24-02

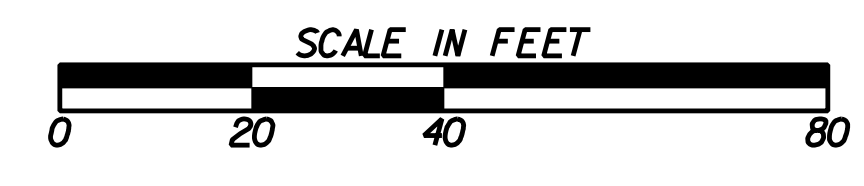


EXISTING R/W & PROPERTY LINE
REQUIRED R/W LINE
CONSTRUCTION LIMITS
EASEMENT FOR CONSTRUCTION
& MAINT. OF SLOPES & UTILITIES
EASEMENT FOR CONSTR OF SLOPES
EASEMENT FOR CONSTR OF DRIVES

BEGIN LIMIT OF ACCESSBLA
END LIMIT OF ACCESSELA
LIMIT OF ACCESS
R/W AND LIMIT OF ACCESS



GRESHAM
SMITH AND
PARTNERS



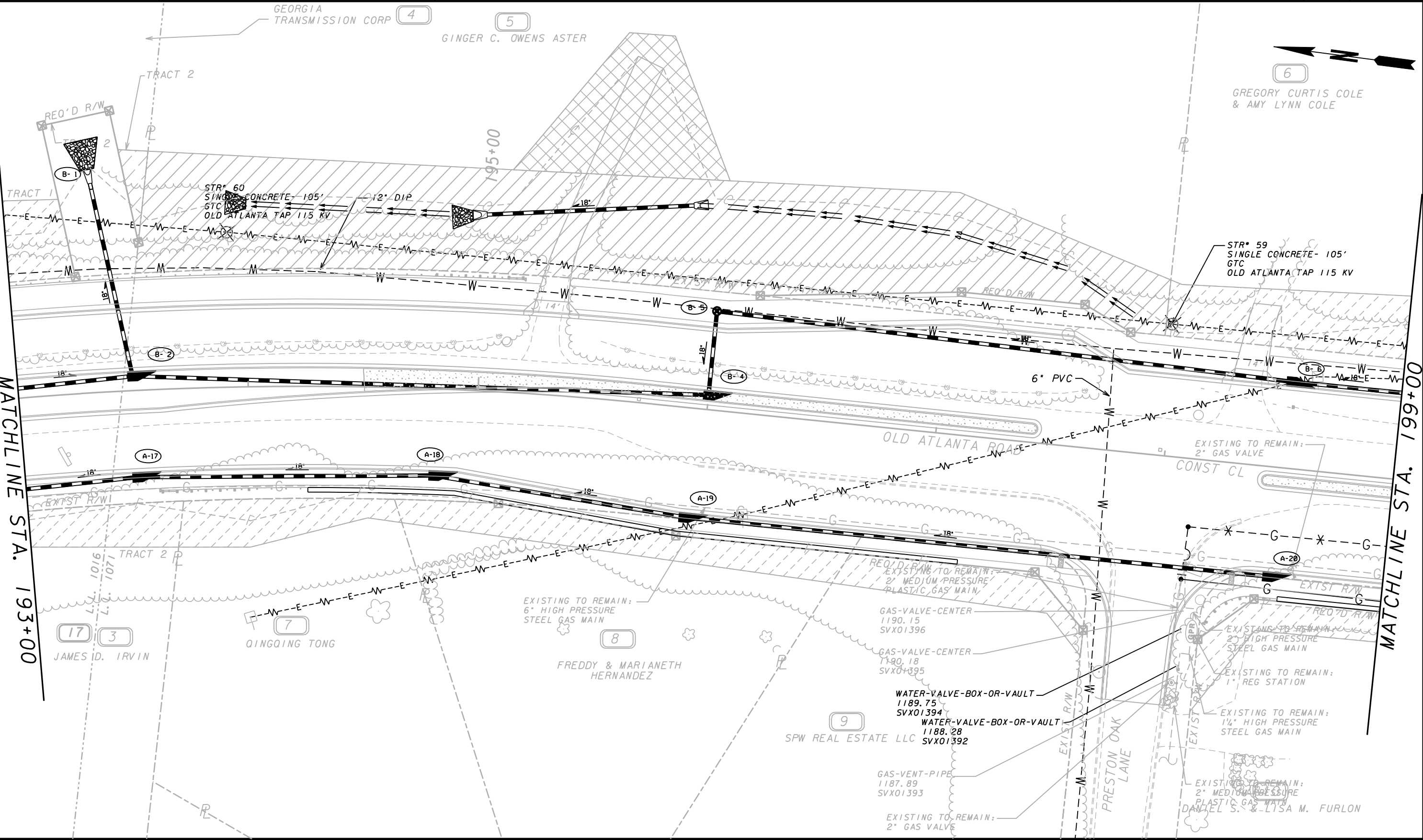
REVISION DATES

FORSYTH COUNTY
ENGINEERING DEPARTMENT

UTILITY PLANS

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
24-03



- EXISTING R/W & PROPERTY LINE
REQUIRED R/W LINE
CONSTRUCTION LIMITS
EASEMENT FOR CONSTRUCTION
& MAINT. OF SLOPES & UTILITIES
EASEMENT FOR CONSTR OF SLOPES
EASEMENT FOR CONSTR OF DRIVES

BEGIN LIMIT OF ACCESSBLA
END LIMIT OF ACCESSELA
LIMIT OF ACCESS
R/W AND LIMIT OF ACCESS



G R E S H A M
S M I T H A N D
P A R T N E R S



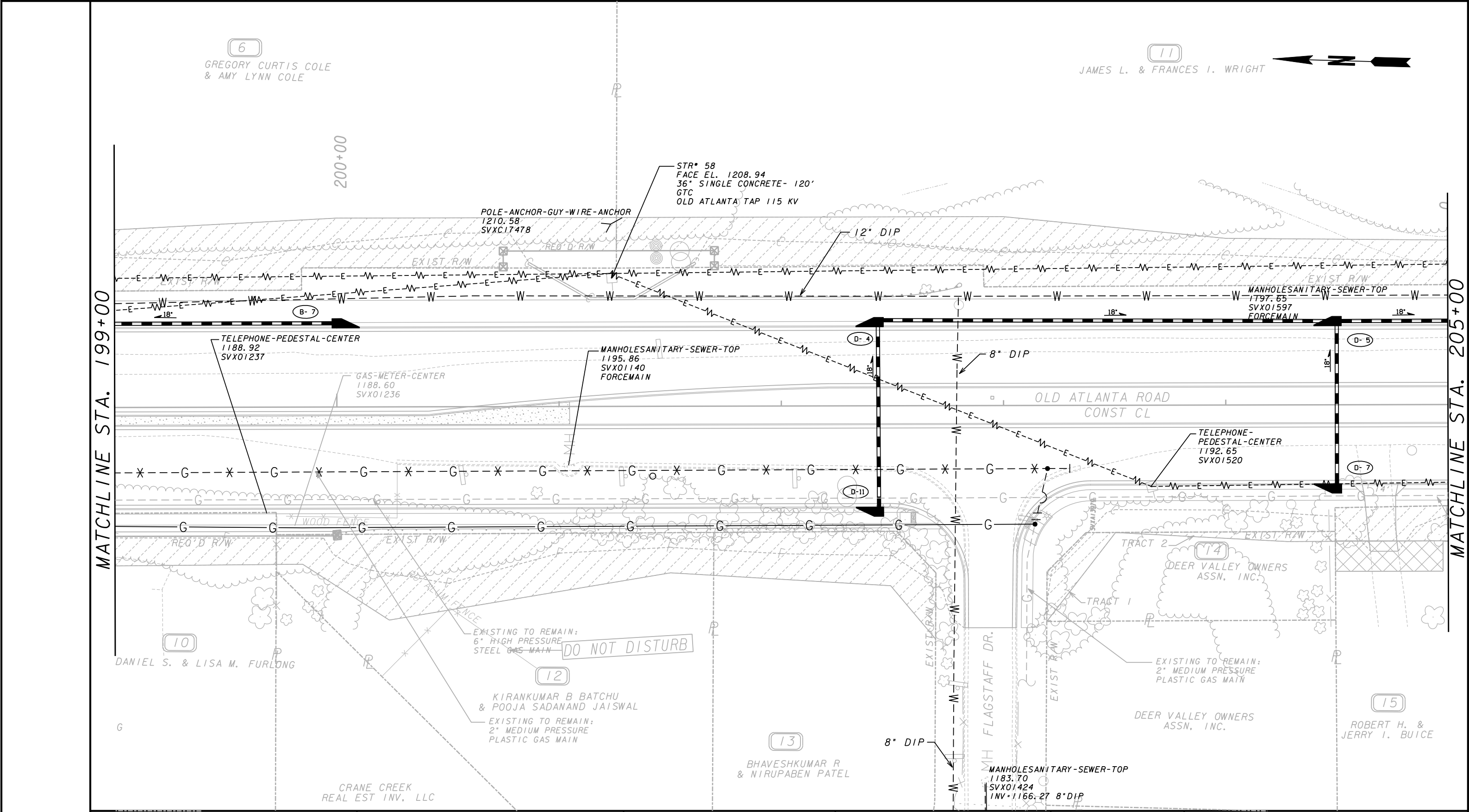
REVISION DATES	
4-17-20	

FORSYTH COUNTY
ENGINEERING DEPARTMENT

UTILITY PLANS

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
24-04

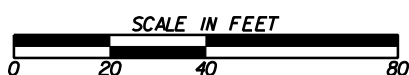


EXISTING R/W & PROPERTY LINE
REQUIRED R/W LINE
CONSTRUCTION LIMITS
EASEMENT FOR CONSTRUCTION
& MAINT. OF SLOPES & UTILITIES
EASEMENT FOR CONSTR OF SLOPES
EASEMENT FOR CONSTR OF DRIVES

BEGIN LIMIT OF ACCESS
END LIMIT OF ACCESS
LIMIT OF ACCESS
R/W AND LIMIT OF ACCESS



G R E S H A M
S M I T H A N D
P A R T N E R S



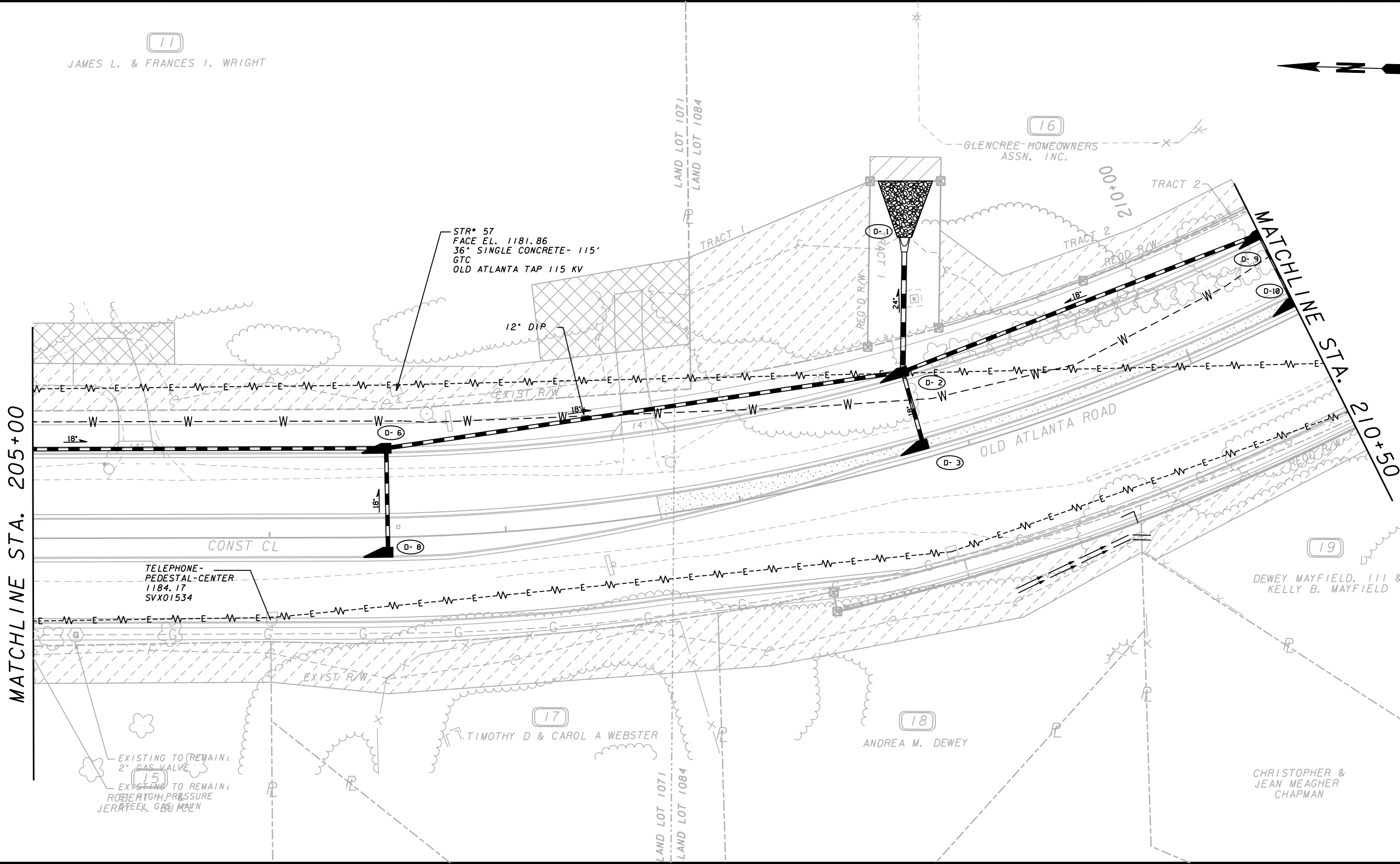
REVISION DATES		
4-17-20		

FORSYTH COUNTY
ENGINEERING DEPARTMENT

UTILITY PLANS

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
24-05



- EXISTING R/W & PROPERTY LINE
- REQUIRED R/W LINE
- CONSTRUCTION LIMITS
- EASEMENT FOR CONSTRUCTION & MAINT. OF SLOPES & UTILITIES
- EASEMENT FOR CONSTR OF SLOPES
- EASEMENT FOR CONSTR OF DRIVES

- BEGIN LIMIT OF ACCESS
- END LIMIT OF ACCESS
- LIMIT OF ACCESS
- R/W AND LIMIT OF ACCESS



GRESHAM
SMITH AND
PARTNERS



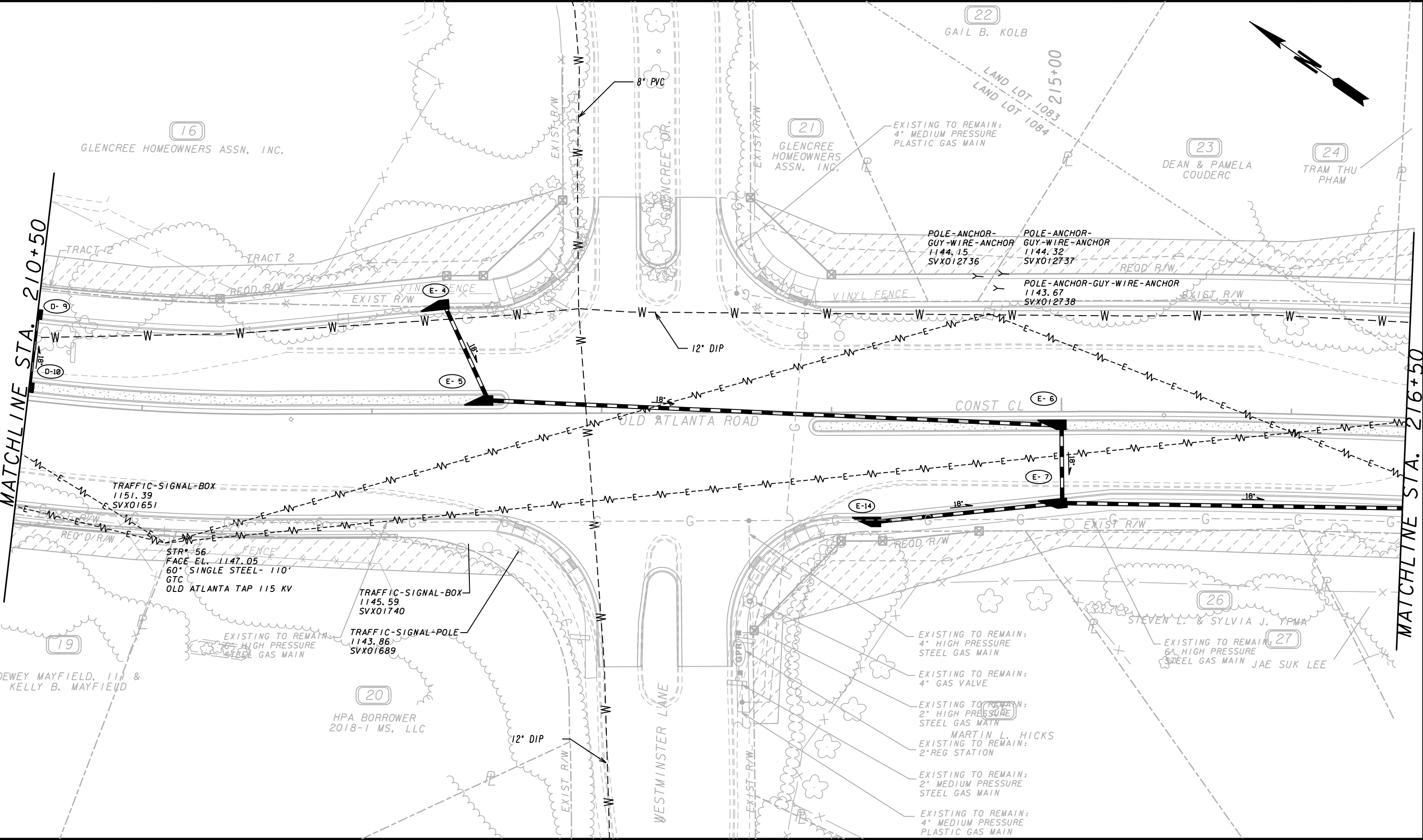
REVISION DATES		
4-17-20		

FORSYTH COUNTY
ENGINEERING DEPARTMENT

UTILITY PLANS

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
24-06



EXISTING R/W & PROPERTY LINE

REQUIRED R/W LINE

CONSTRUCTION LIMITS

EASEMENT FOR CONSTRUCTION & MAINT. OF SLOPES & UTILITIES

EASEMENT FOR CONSTR OF SLOPES

EASEMENT FOR CONSTR OF DRIVES

BEGIN LIMIT OF ACCESS

END LIMIT OF ACCESS

LIMIT OF ACCESS

R/W AND LIMIT OF ACCESS

G R E S H A M
S M I T H A N D
P A R T N E R S

SCALE IN FEET

0 20 40 80

REVISION DATES

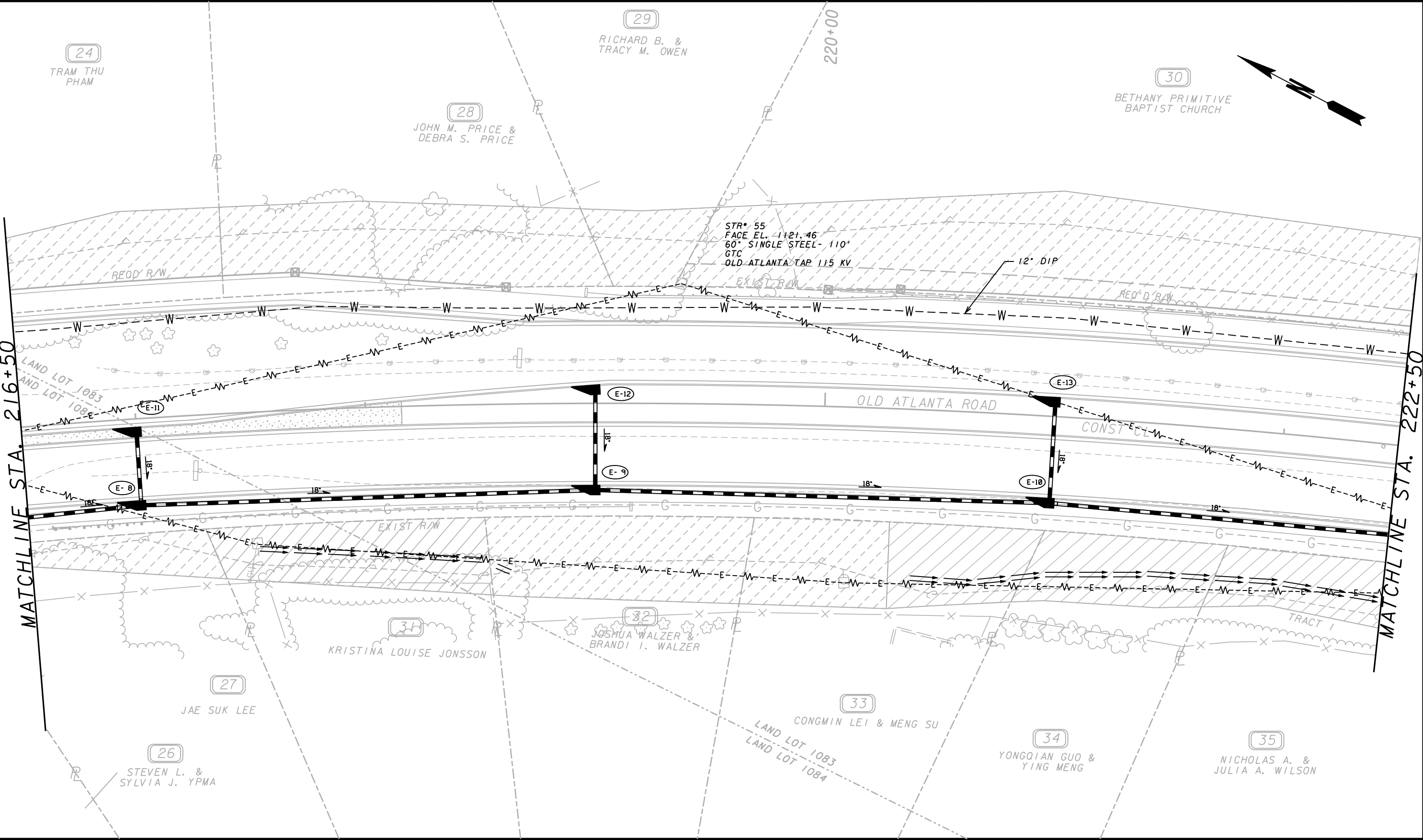
4-17-20		

FORSYTH COUNTY
ENGINEERING DEPARTMENT

UTILITY PLANS

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
24-07



EXISTING R/W & PROPERTY LINE
REQUIRED R/W LINE
CONSTRUCTION LIMITS
EASEMENT FOR CONSTRUCTION
& MAINT. OF SLOPES & UTILITIES
EASEMENT FOR CONSTR. OF SLOPES
EASEMENT FOR CONSTR. OF DRIVES

BEGIN LIMIT OF ACCESSBLA
END LIMIT OF ACCESSELA
LIMIT OF ACCESS
R/W AND LIMIT OF ACCESS



G R E S H A M
S M I T H A N D
P A R T N E R S



REVISION DATES		
4-17-20		

FORSYTH COUNTY
ENGINEERING DEPARTMENT

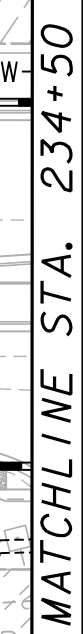
UTILITY PLANS

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
24-08



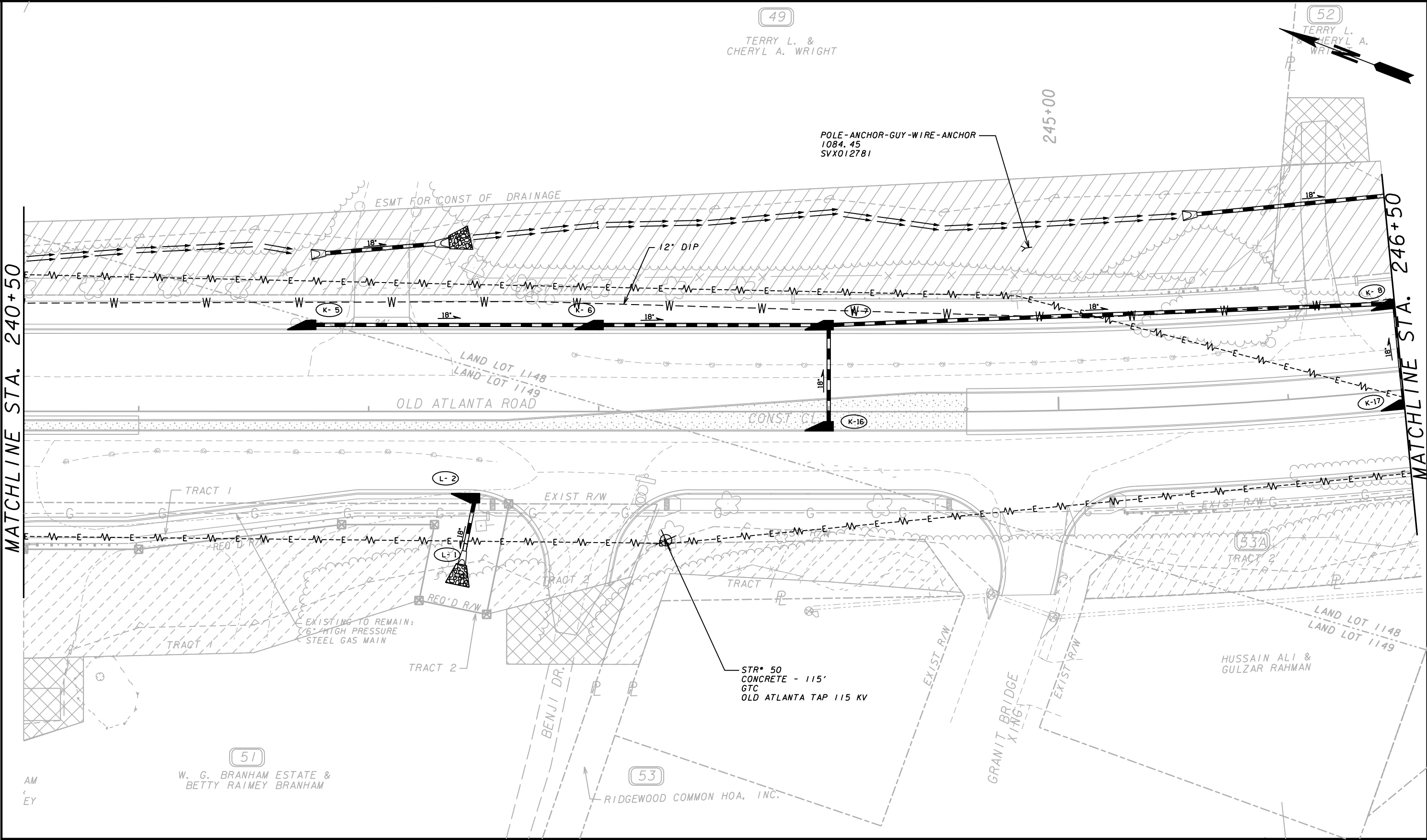
DRAWING No.
4-09



DRAWING No.
24-10



DRAWING No.
24-11



EXISTING R/W & PROPERTY LINE
REQUIRED R/W LINE
CONSTRUCTION LIMITS
EASEMENT FOR CONSTRUCTION
& MAINT. OF SLOPES & UTILITIES
EASEMENT FOR CONSTR OF SLOPES
EASEMENT FOR CONSTR OF DRIVES

BEGIN LIMIT OF ACCESSBLA
END LIMIT OF ACCESSELA
LIMIT OF ACCESS
R/W AND LIMIT OF ACCESS



G R E S H A M
S M I T H A N D
P A R T N E R S



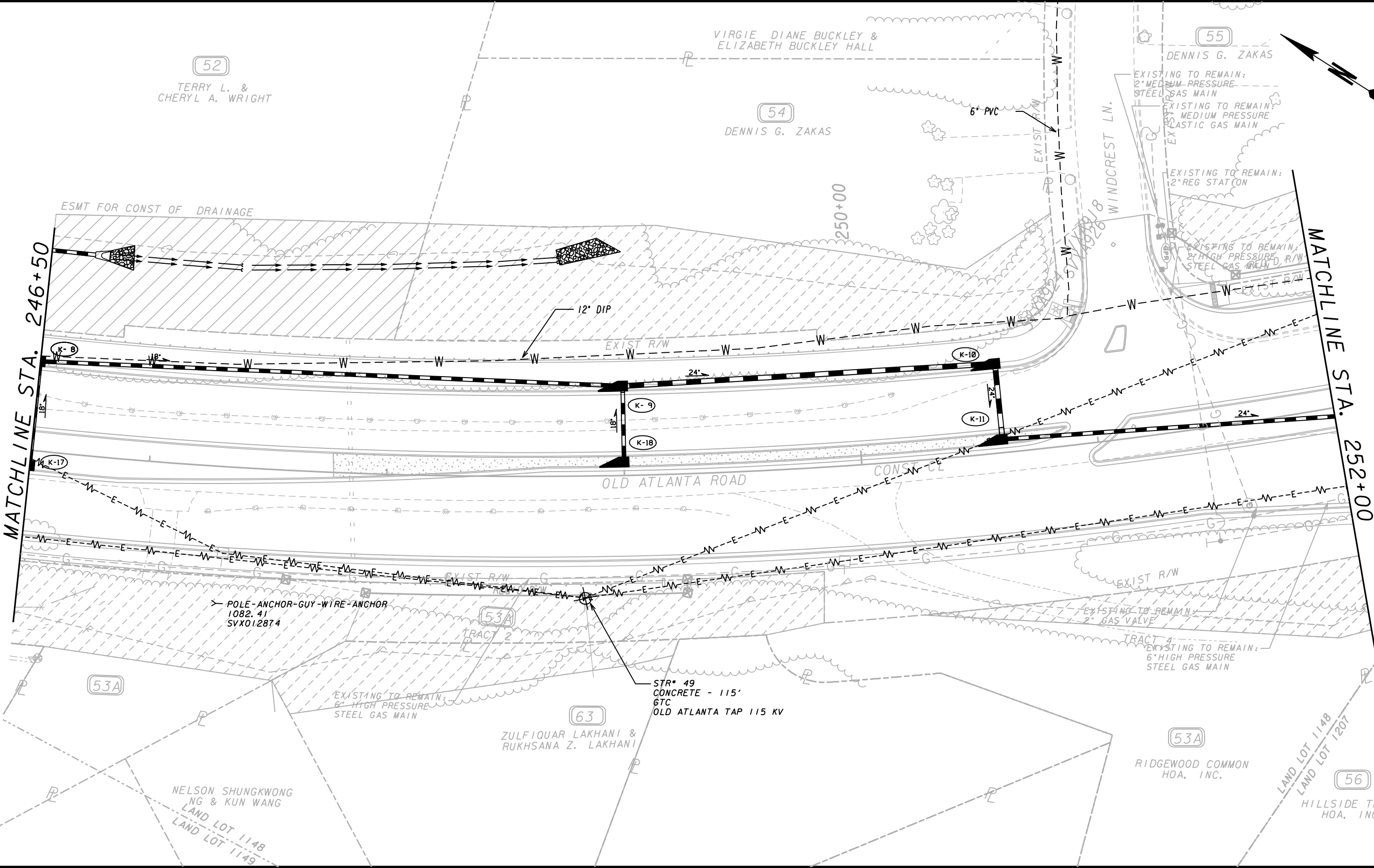
REVISION DATES		
4-17-20		

FORSYTH COUNTY
ENGINEERING DEPARTMENT

UTILITY PLANS

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
24-12



EXISTING R/W & PROPERTY LINE

REQUIRED R/W LINE

CONSTRUCTION LIMITS

EASEMENT FOR CONSTRUCTION & MAINT. OF SLOPES & UTILITIES

EASEMENT FOR CONSTR. OF SLOPES

EASEMENT FOR CONSTR. OF DRIVES

-----BLA

-----ELA

G R E S H A M
S M I T H A N D
P A R T N E R S

SCALE IN FEET

0 20 40 80

REVISION DATES

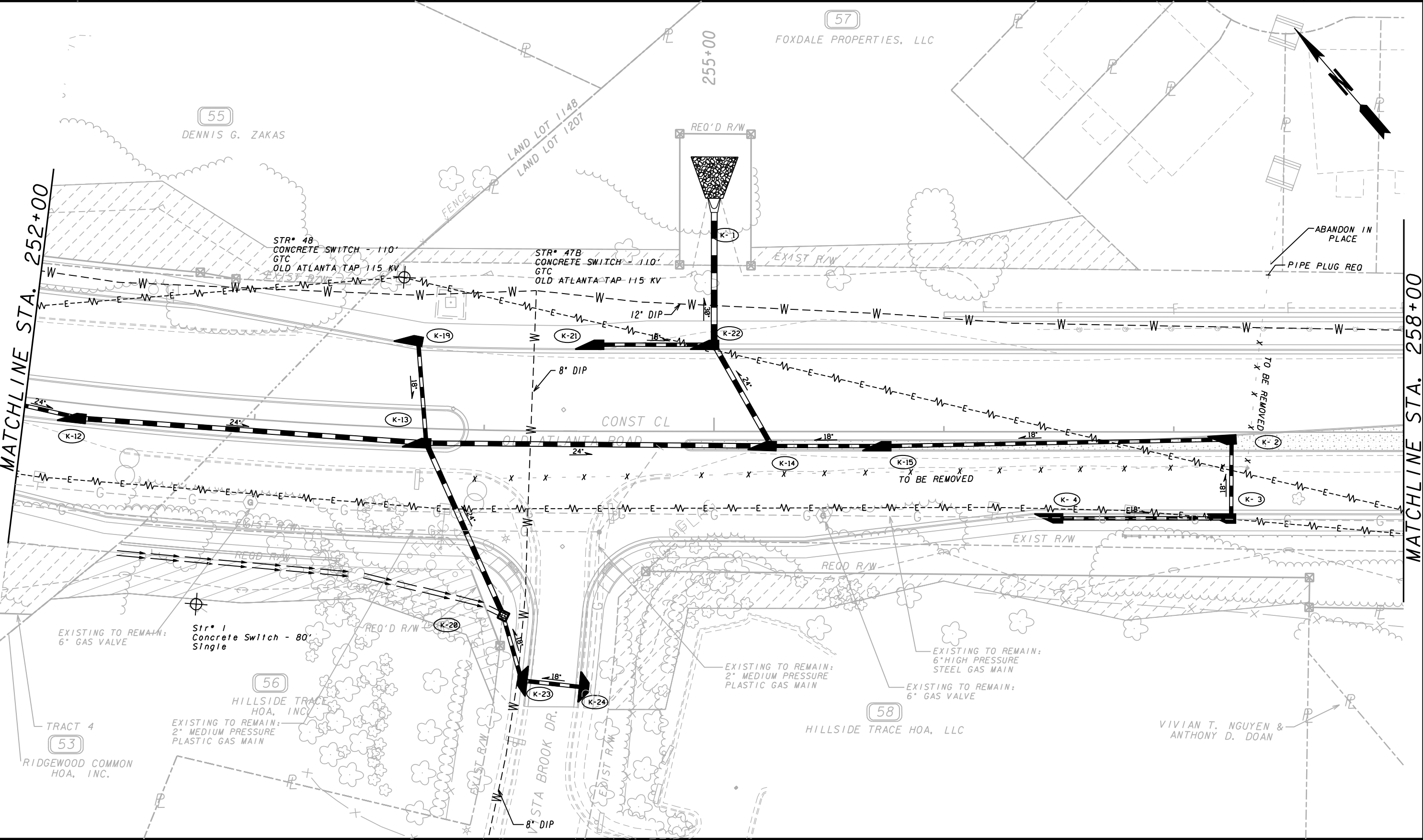
4-17-20		

FORSYTH COUNTY
ENGINEERING DEPARTMENT

UTILITY PLANS

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
24-13



EXISTING R/W & PROPERTY LINE

REQUIRED R/W LINE

CONSTRUCTION LIMITS

EASEMENT FOR CONSTRUCTION & MAINT. OF SLOPES & UTILITIES

EASEMENT FOR CONSTR OF SLOPES

EASEMENT FOR CONSTR OF DRIVES

BEGIN LIMIT OF ACCESS

END LIMIT OF ACCESS

LIMIT OF ACCESS

R/W AND LIMIT OF ACCESS

G R E S H A M
S M I T H A N D
P A R T N E R S

SCALE IN FEET

0 20 40 80

REVISION DATES

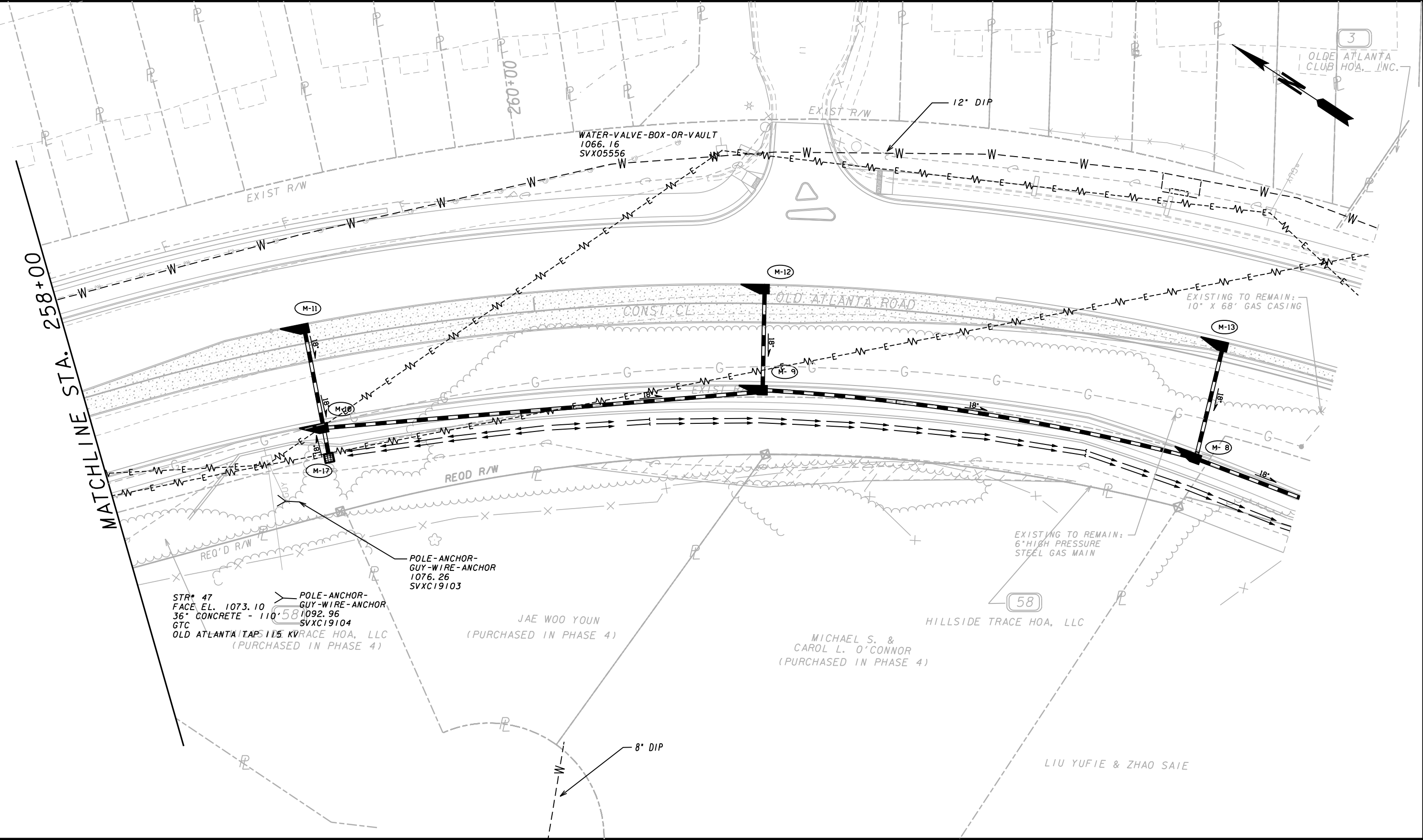
4-17-20

FORSYTH COUNTY
ENGINEERING DEPARTMENT

UTILITY PLANS

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
24-14



EXISTING R/W & PROPERTY LINE	---
REQUIRED R/W LINE	---
CONSTRUCTION LIMITS	21' F
EASEMENT FOR CONSTRUCTION & MAINT. OF SLOPES & UTILITIES	[Hatched Box]
EASEMENT FOR CONSTR OF SLOPES	[Hatched Box]
EASEMENT FOR CONSTR OF DRIVES	[Cross-hatched Box]

BEGIN LIMIT OF ACCESSBLA
END LIMIT OF ACCESSELA
LIMIT OF ACCESS	----
R/W AND LIMIT OF ACCESS	==



G R E S H A M
S M I T H A N D
P A R T N E R S



REVISION DATES		
4-17-20		

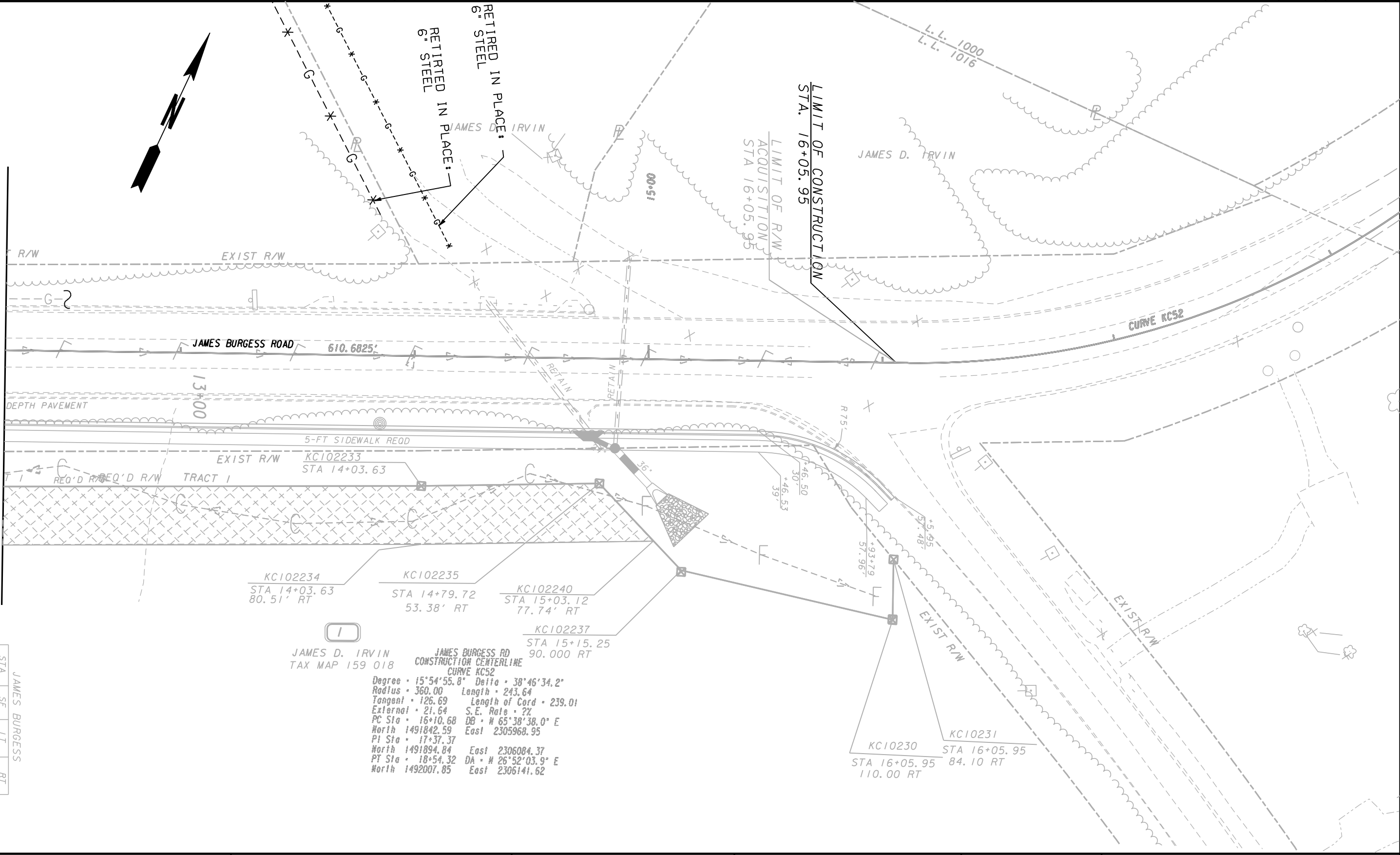
FORSYTH COUNTY
ENGINEERING DEPARTMENT

UTILITY PLANS

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
24-15

MATCHLINE STA. 12+25
SEE SHEET 13-02



STA	SE	LT	RT
10+34	MAIN	0.63%	-0.63%
10+50	FLAT	0.00%	-0.63%
10+98	NC	-2.00%	-2.00%

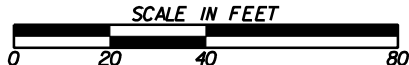
KC102234 STA 14+03.63 80.51' RT	KC102235 STA 14+79.72 53.38' RT	KC102240 STA 15+03.12 77.74' RT	KC102237 STA 15+15.25 90.00 RT
JAMES D. IRVIN TAX MAP 159 018			
JAMES BURGESS RD CONSTRUCTION CENTERLINE CURVE KC52			
Degree • 15°54'55.8" Delta • 38°46'34.2"			
Radius • 360.00 Length • 243.64			
Tangent • 126.69 Length of Cord • 239.01			
External • 21.64 S.E. Rate • 2%			
PC Sta • 16+10.68 DB • N 65°38'38.0" E			
North 1491842.59 East 2305968.95			
PI Sta • 17+37.37			
North 1491894.84 East 2306084.37			
PT Sta • 18+54.32 DA • N 26°52'03.9" E			
North 1492007.85 East 2306141.62			

- EXISTING R/W & PROPERTY LINE
- REQUIRED R/W LINE
- CONSTRUCTION LIMITS
- EASEMENT FOR CONSTRUCTION & MAINT. OF SLOPES & UTILITIES
- EASEMENT FOR CONSTR OF SLOPES
- EASEMENT FOR CONSTR OF DRIVES

- BEGIN LIMIT OF ACCESS
- END LIMIT OF ACCESS
- LIMIT OF ACCESS
- R/W AND LIMIT OF ACCESS



G R E S H A M
S M I T H A N D
P A R T N E R S



REVISION DATES		
4-17-20		

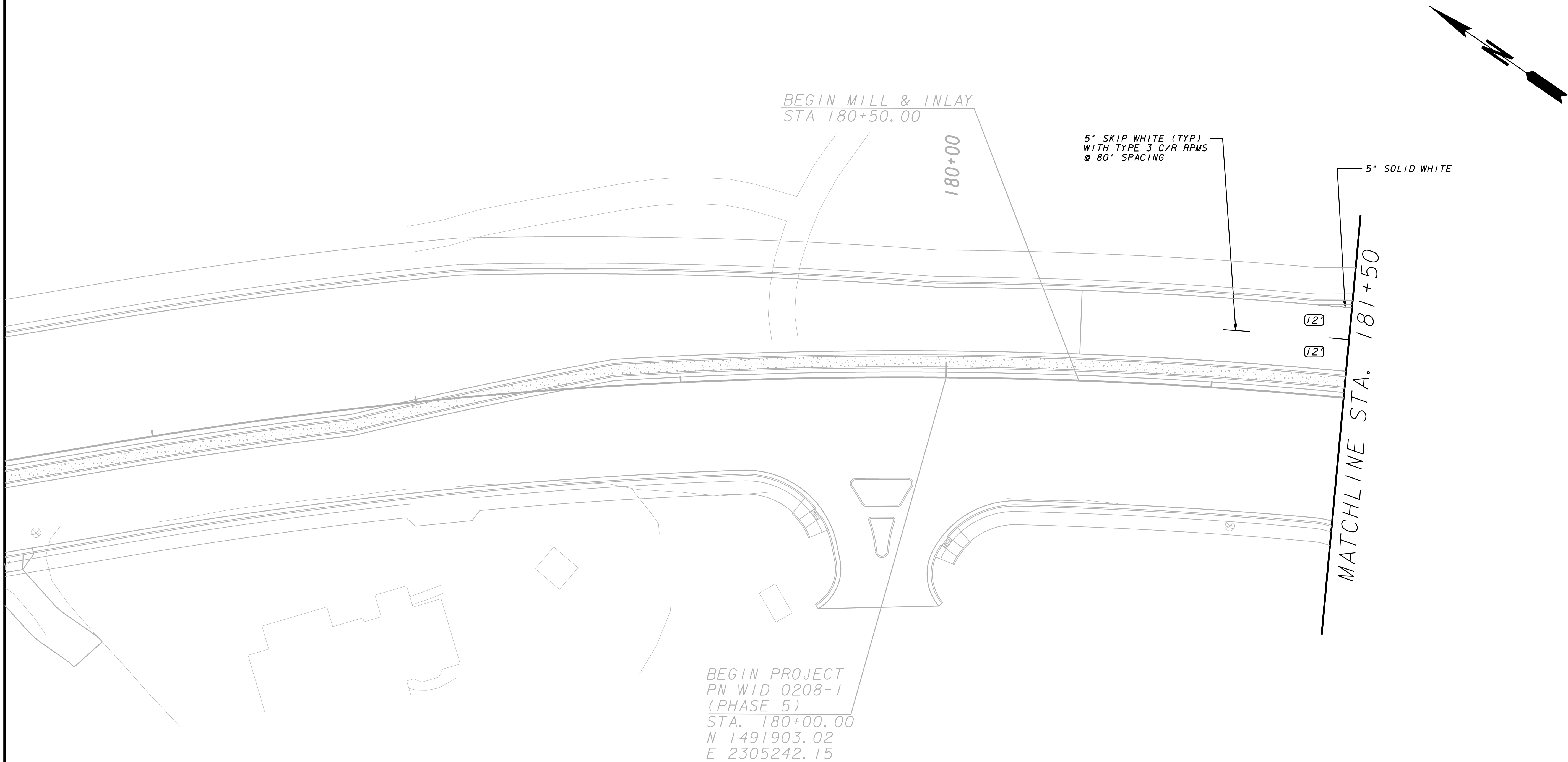
FORSYTH COUNTY
ENGINEERING DEPARTMENT

UTILITY PLANS
JAMES BURGESS ROAD

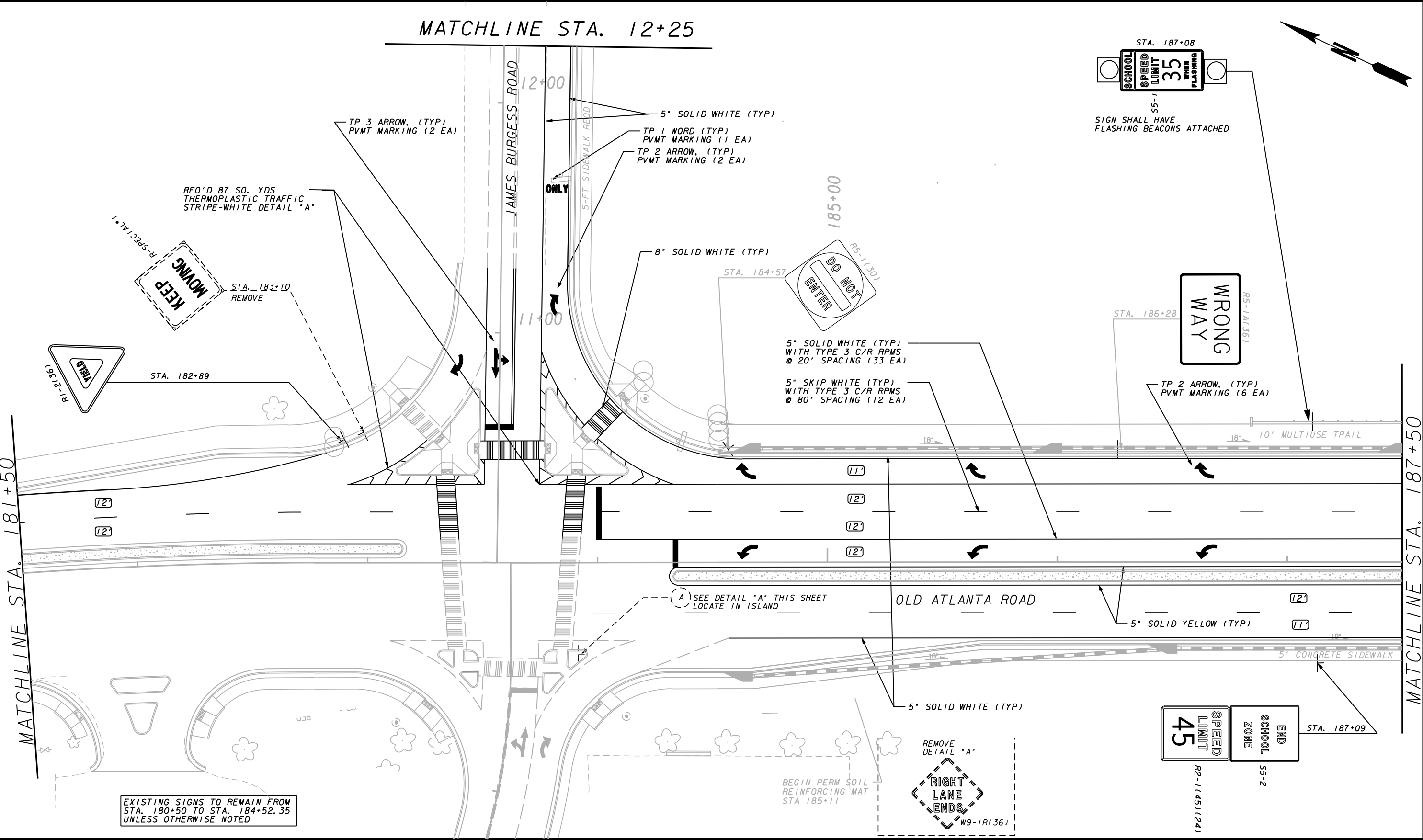
WID 0208-1 (PHASE 5)
FORSYTH COUNTY

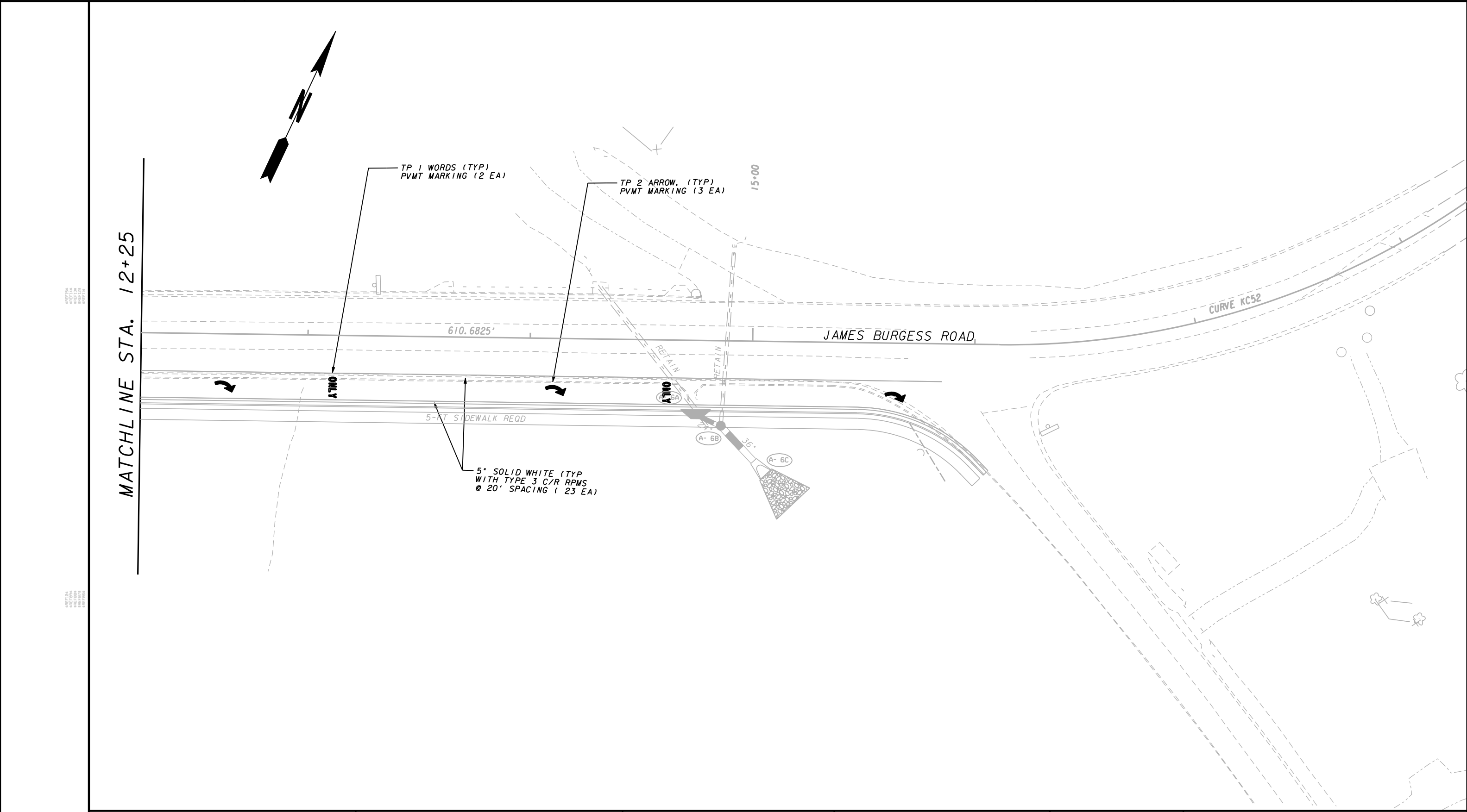
DRAWING No.
24-16

		COUNTY	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
		FORSYTH	WID 0208-1		



		 GRESHAM SMITH AND PARTNERS		REVISION DATES			FORSYTH COUNTY ENGINEERING DEPARTMENT		
							SIGNING AND MARKING PLANS		
							WID 0208-1 (PHASE 5) FORSYTH COUNTY		
							DRAWING No. 26-01		





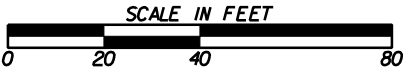
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REQUIRED R/W LINE
CONSTRUCTION LIMITS
EASEMENT FOR CONSTRUCTION
& MAINT. OF SLOPES & UTILITIES
EASEMENT FOR CONSTR OF SLOPES
EASEMENT FOR CONSTR OF DRIVES
- C

F

BEGIN LIMIT OF ACCESSBLA
END LIMIT OF ACCESSELA
LIMIT OF ACCESS
R/W AND LIMIT OF ACCESS



G R E S H A M
S M I T H A N D
P A R T N E R S



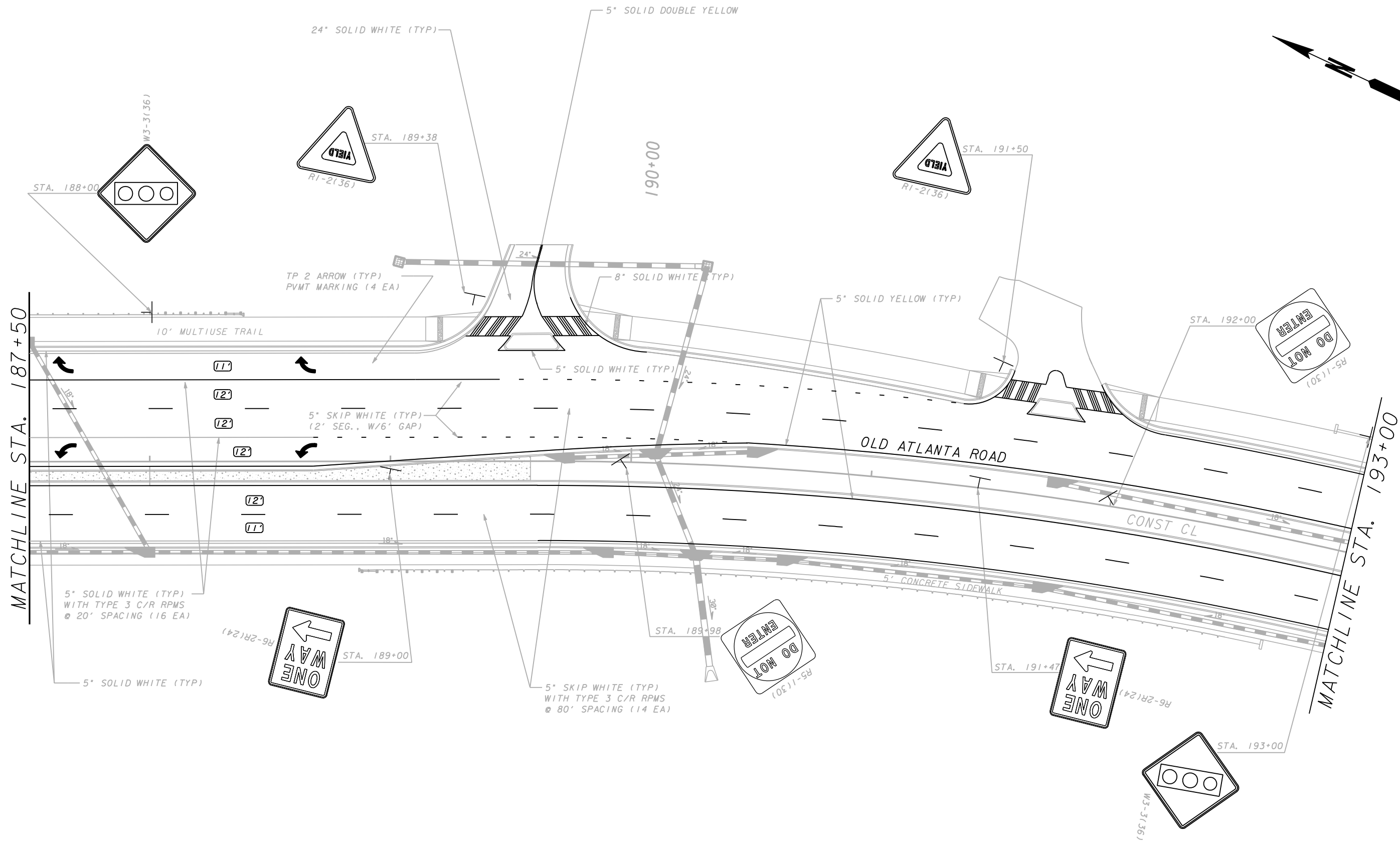
REVISION DATES		
4-17-20		

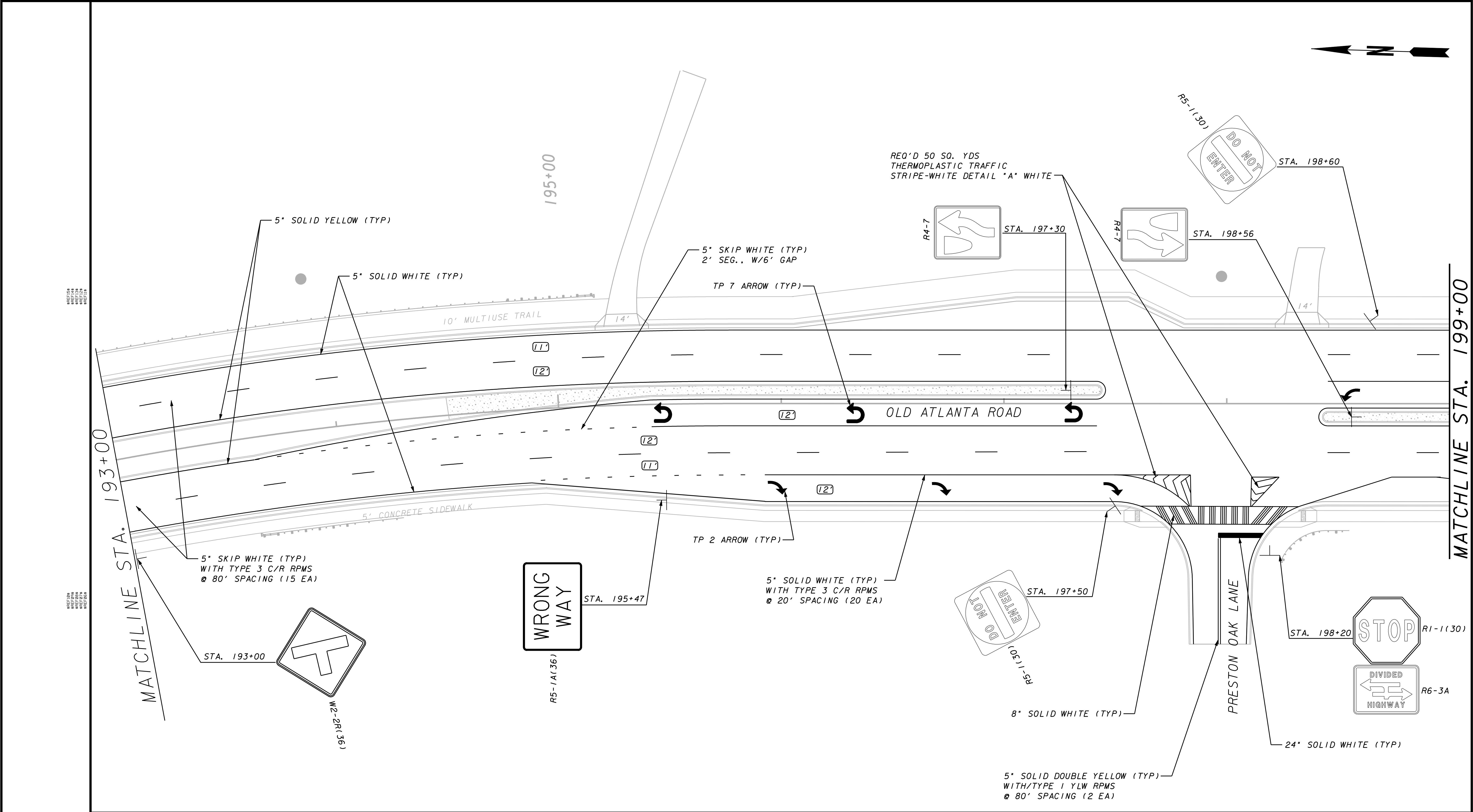
FORSYTH COUNTY
ENGINEERING DEPARTMENT

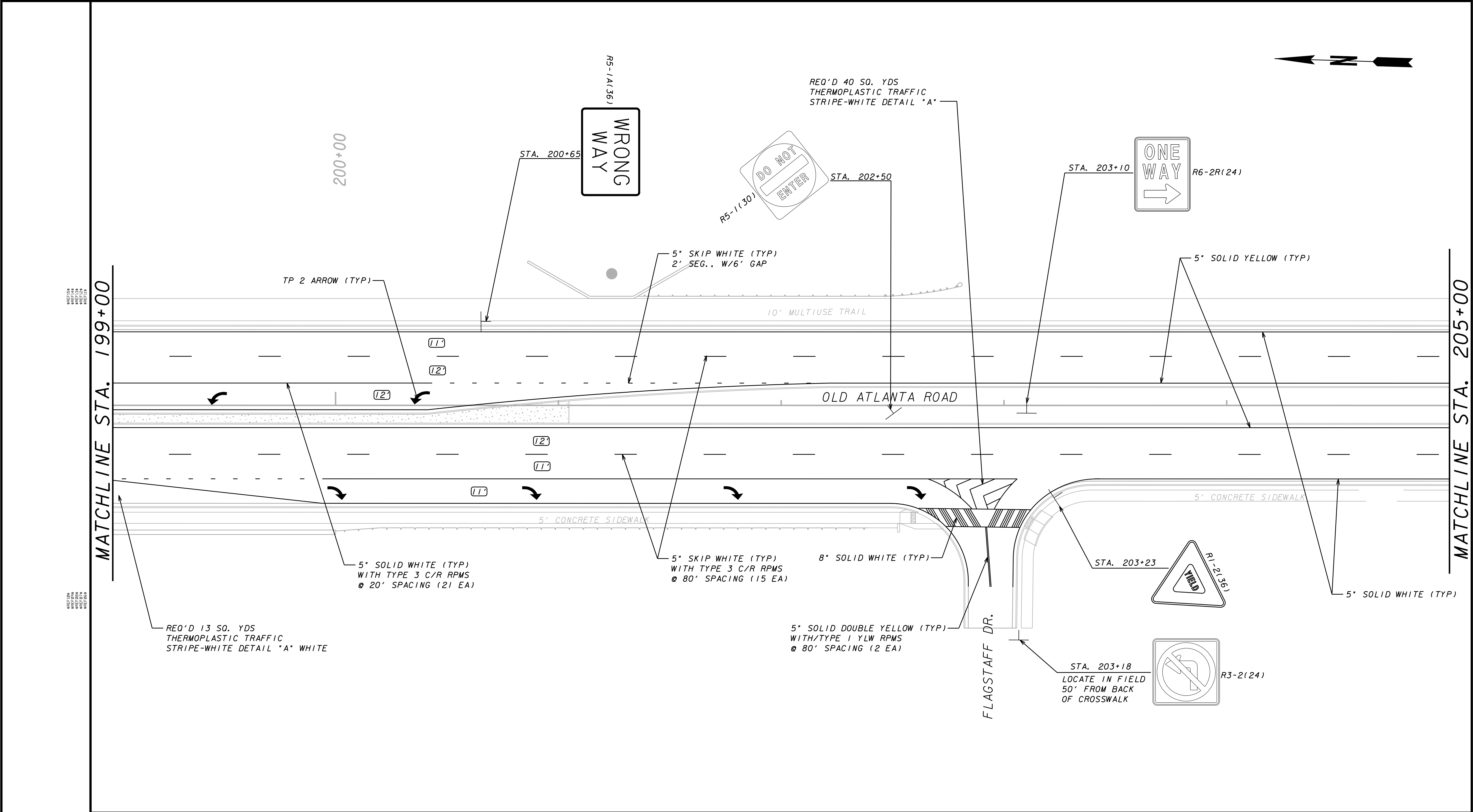
SIGNING AND MARKING PLANS
JAMES BURGESS ROAD

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
26-02A

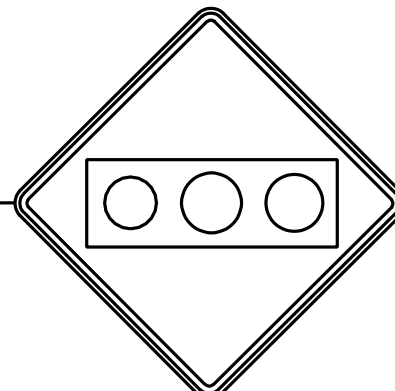






MATCHLINE STA. 205+00

STA. 205+80



W3-3(36)

DO NOT DISTURB
GTC POLE

5" SOLID YELLOW (TYP)

5" SKIP WHITE (TYP)
WITH TYPE 3 C/R RPMS
@ 80' SPACING (14 EA)

5" SOLID WHITE (TYP)

10' MULTISE TRAIL

OLD ATLANTA ROAD

MATCHLINE STA. 210+50

5" SOLID WHITE (TYP)
WITH TYPE 3 C/R RPMS
@ 20' SPACING (19 EA)

TP 2 ARROW (TYP)

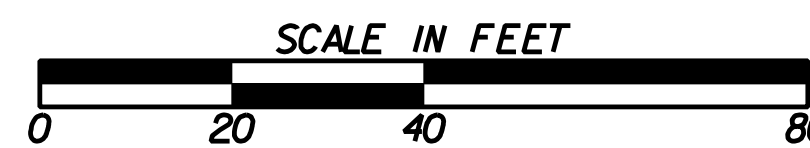
5" SKIP WHITE (TYP)
2' SEG., W/6' GAP

NON-FLARED
ANCHOR
TYPE 12

5' CONCRETE SIDEWALK



GRESHAM
SMITH AND
PARTNERS



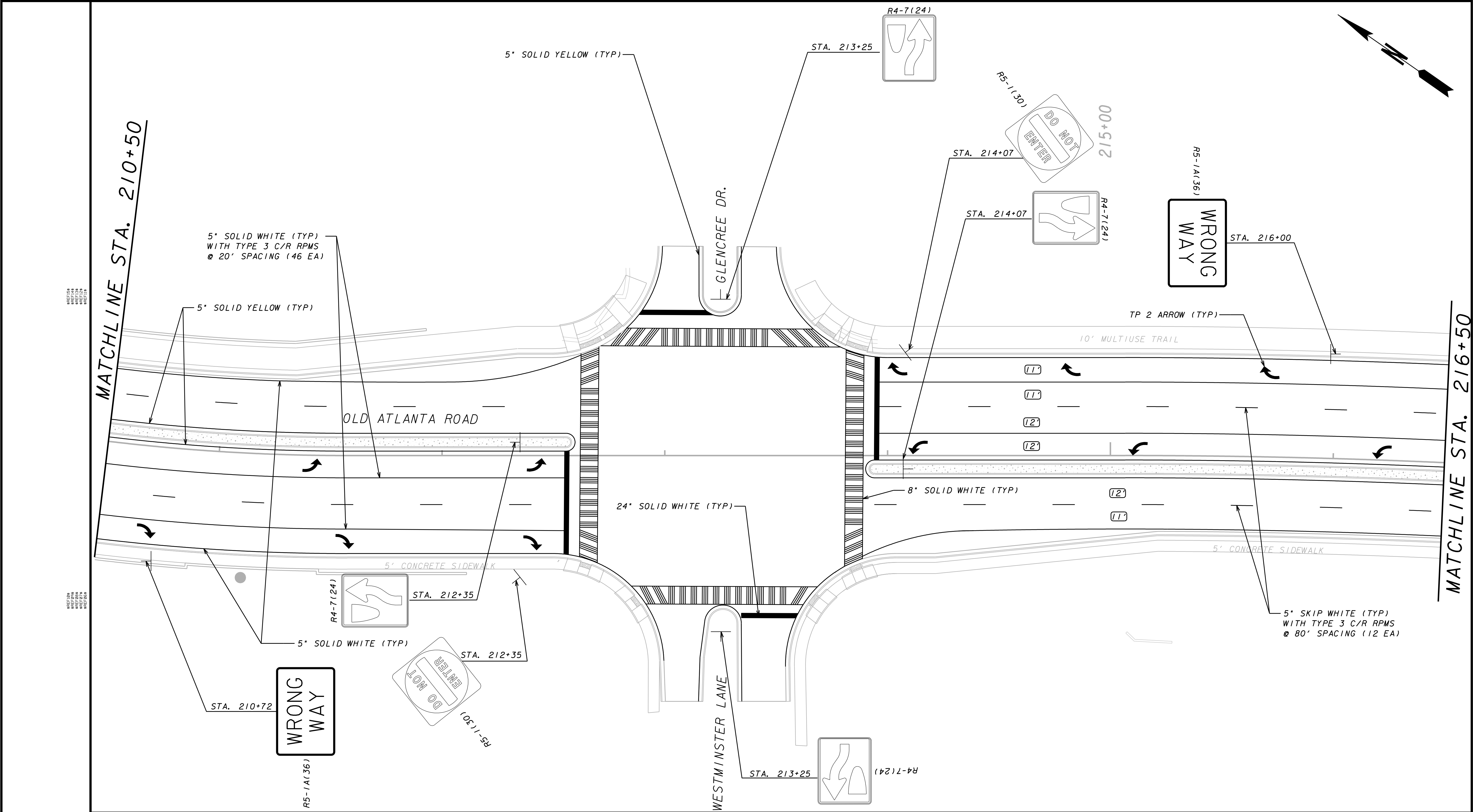
REVISION DATES

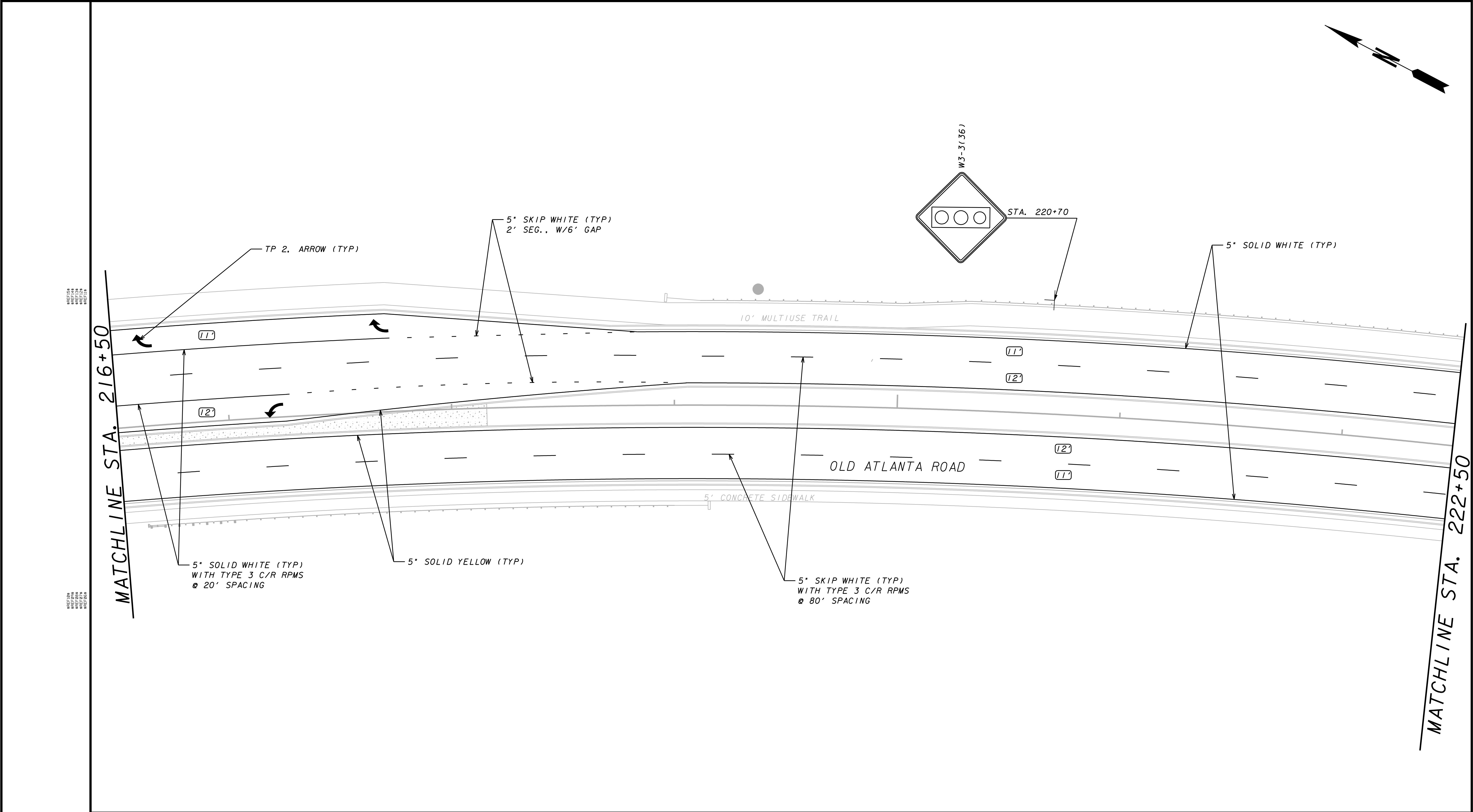
FORSYTH COUNTY
ENGINEERING DEPARTMENT

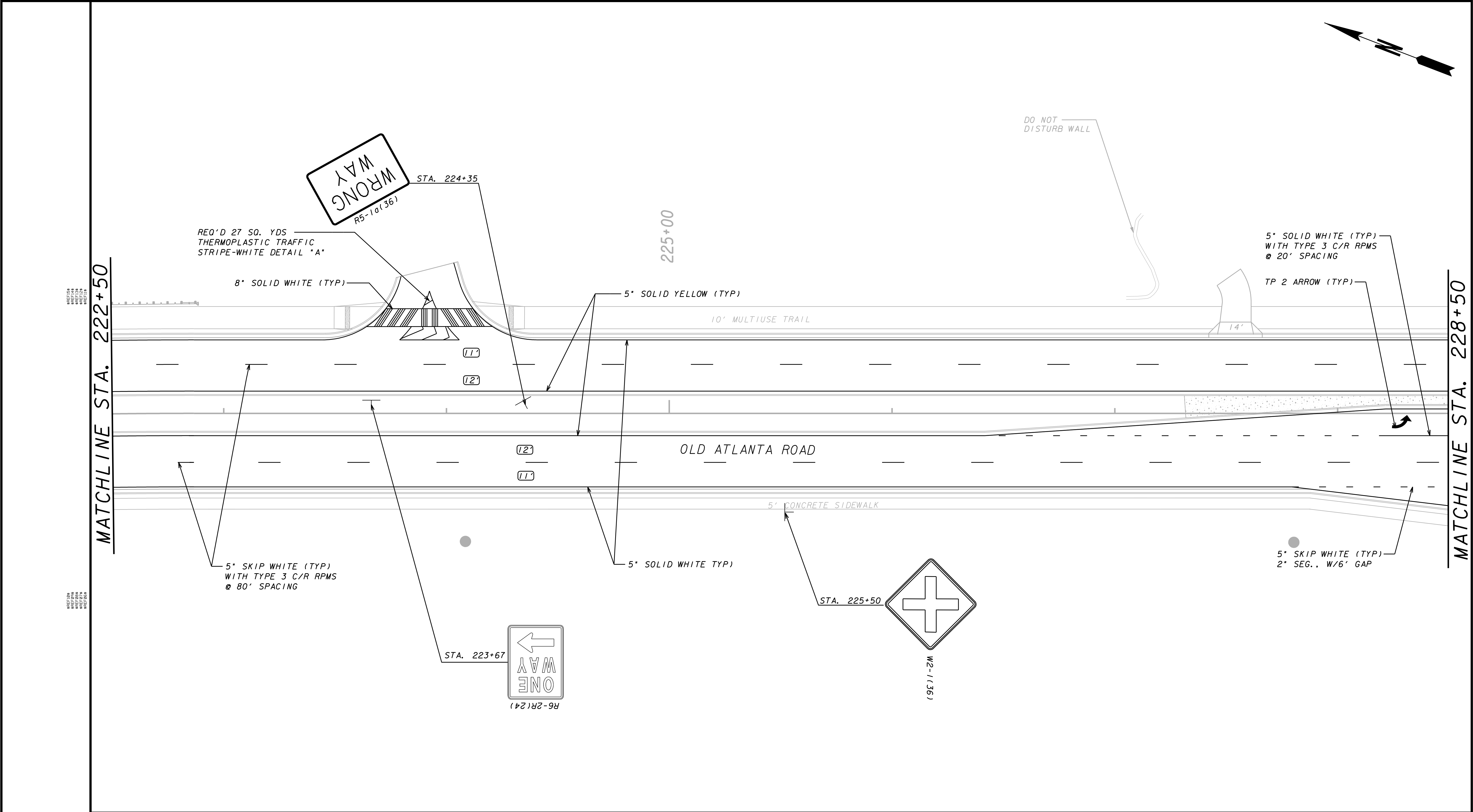
SIGNING AND MARKING PLANS

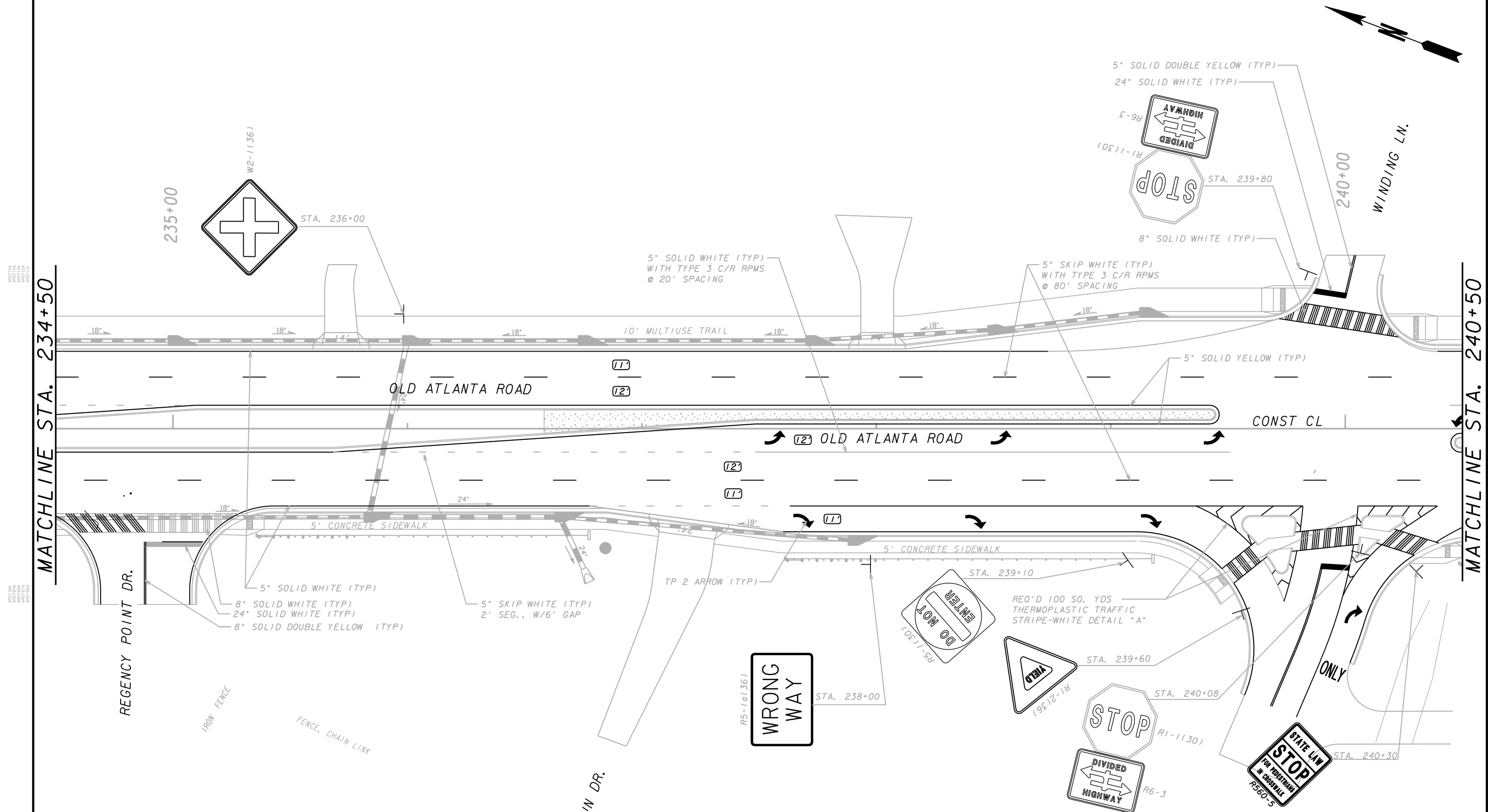
WID 0208-1 (PHASE 5)
FORSYTH COUNTY

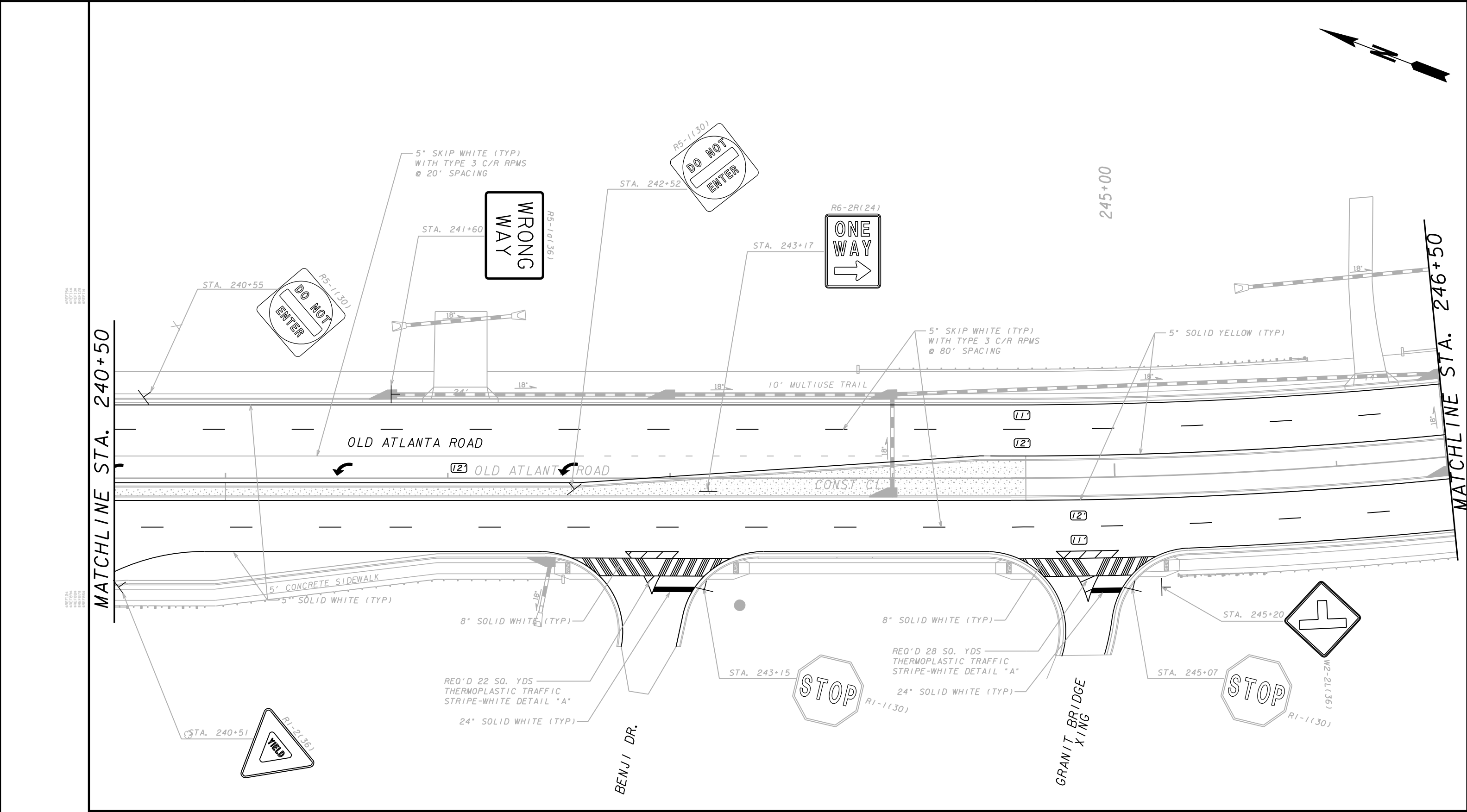
DRAWING No.
26-06













GRESHAM
SMITH AND
PARTNERS

SCALE IN FEET

0

20

40

80

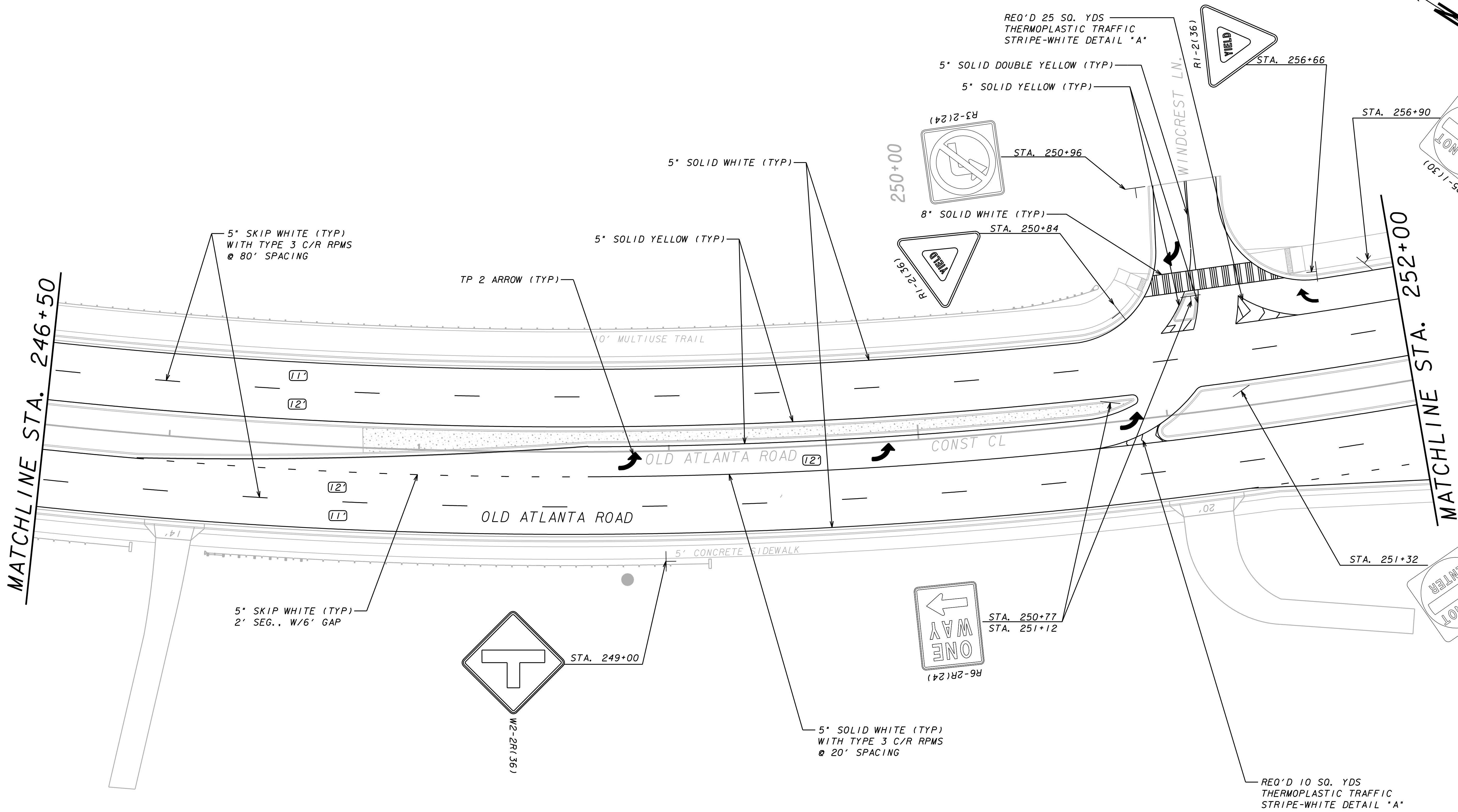
REVISION DATES		
4-17-20		

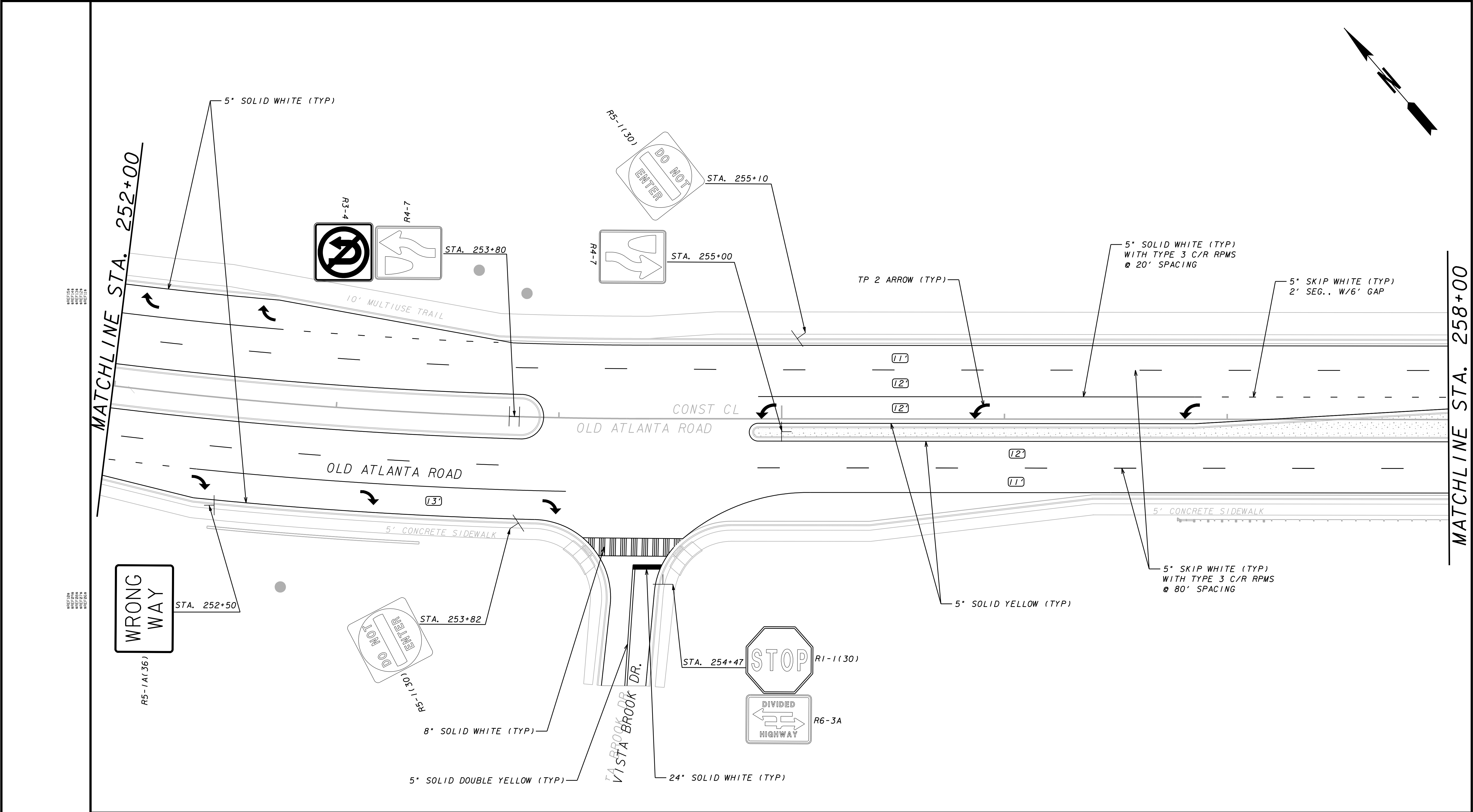
FORSYTH COUNTY
ENGINEERING DEPARTMENT

SIGNING AND MARKING PLANS

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
26-12



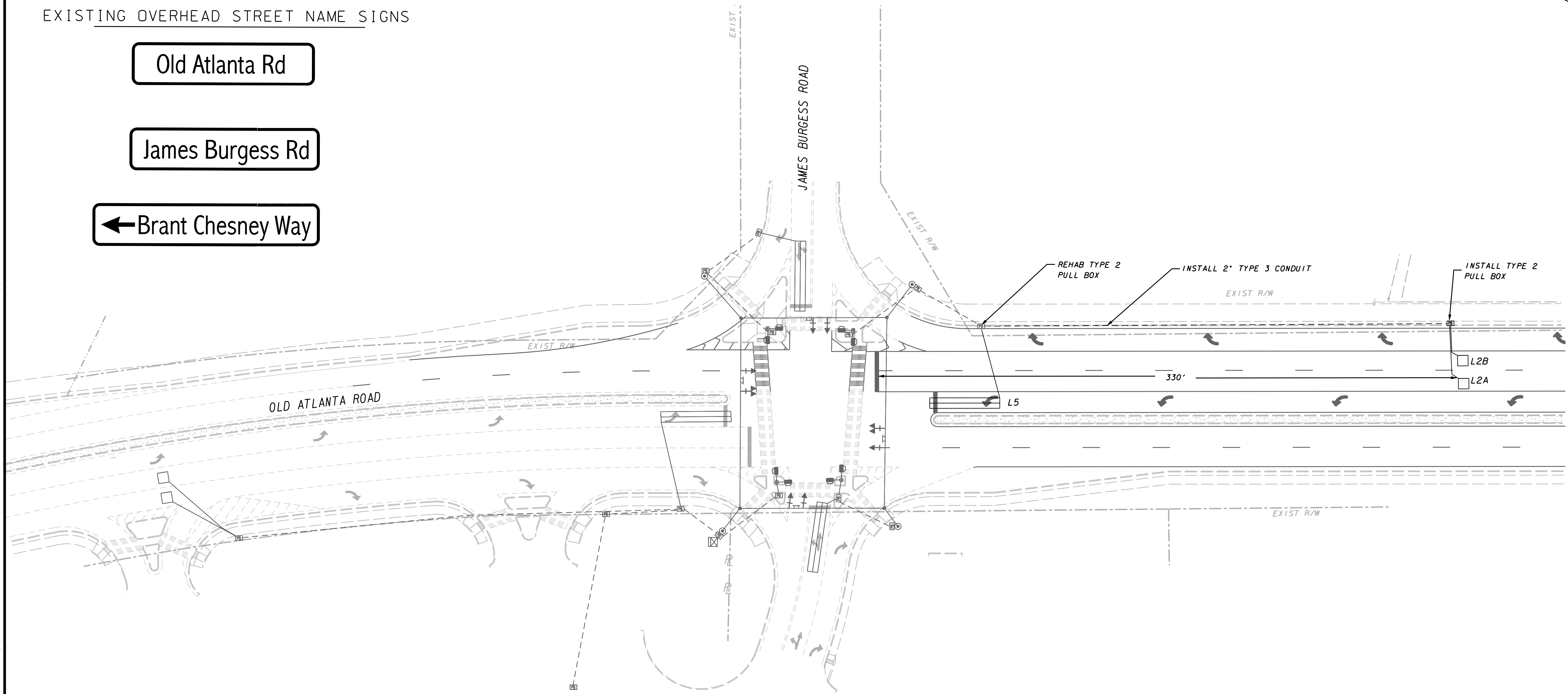


EXISTING OVERHEAD STREET NAME SIGNS

Old Atlanta Rd

James Burgess Rd

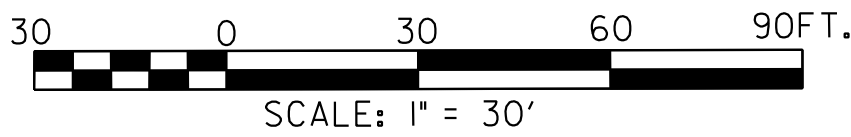
← Brant Chesney Way



NOTE:
1. THE COST OF THE PULLBOX REHAB SHALL BE PAID FOR IN THE INSTALLATION OF THE CONDUIT.



GRESHAM
SMITH AND
PARTNERS



REVISION DATES

FORSYTH COUNTY
ENGINEERING DEPARTMENT

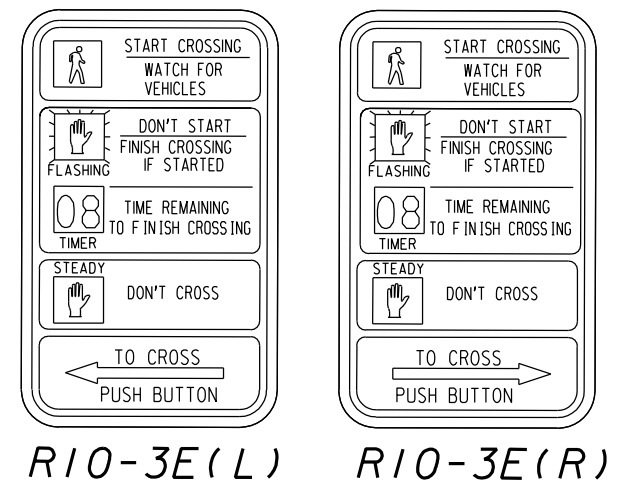
SIGNAL PLANS

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

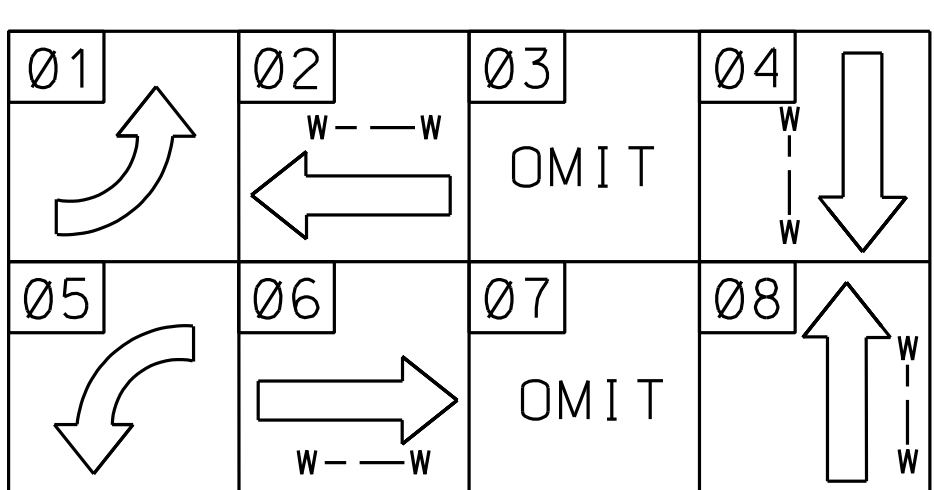
DRAWING No.
27-02

\$DATE\$ \$USER		\$TIMES\$ \$PRF\$ \$TBL\$		\$DGN\$										COUNTY FORSYTH		PROJECT NUMBER WID 0208-1		SHEET NO.	TOTAL SHEETS		
TRAFFIC SIGNAL INSTALLATION NO. 1																					
INTERSECTION: JAMES BURGESS RD @ OLD ATLANTA RD. (SEE SHEET 27-02)																					
ESTIMATED QUANTITIES																					
615-1200		Directional Bore, 4 IN										Lin Ft		315							
682-6233		Conduit, Nonmetl, TP 3, 2 IN										Lin Ft		277							
647-1000		Traffic Signal Installation No. 1										Lump		Lump							
332 CABINET INPUT ASSIGNMENT																					
		SLOT	1	2	3	4	5	6	7	8	9	10	11	12	13	14					
		UPPER INPUT FILE																			
		TYPE	DET	DET	DET	DET	DET	DET	DET	DET	TBA	TBA	DC	DC	DC						
		CARD		2 CHAN.									DC ISO	DC ISO	DC ISO						
CHANNEL 1		C1 PIN	56	39	63	47	58	41	65	49	60		80	67	68	81					
		FUNCTION		L2A												FLASH					
		FIELD TERM	TB2 1,2	TB2 5,6	TB2 9,10	TB4 1,2	TB4 5,6	TB4 9,10	TB6 1,2	TB6 5,6	TB6 9,10			TB8 4,6	TB8 7,9	N/C					
		TYPE	DET	DET	DET	DET	DET	DET	DET	DET	TBA	TBA	DC	DC	DC						
CHANNEL 2		C1 PIN	56	43	76	47	58	45	78	49	62		53	69	70	82					
		FUNCTION		L2B												STOP TIME					
		FIELD TERM	TB2 3,4	TB2 7,8	TB2 11,12	TB4 3,4	TB4 7,8	TB4 11,12	TB6 3,4	TB6 7,8	TB6 11,12			TB8 5,6	TB8 8,9	N/C					
		TYPE	DET	DET	DET	DET	DET	DET	DET	DET	TBA	TBA	DC	DC	DC						
		CARD	2 CHAN.																		
CHANNEL 1		C1 PIN	55	40	64	48	57	42	66	50	59		54	71	72	51					
		FUNCTION	L5																		
		FIELD TERM	TB3 1,2	TB3 5,6	TB3 9,10	TB5 1,2	TB5 5,6	TB5 9,10	TB7 1,2	TB7 5,6	TB7 9,10			TB9 4,6	TB9 7,9	TB9 10,12					
		TYPE	DET	DET	DET	DET	DET	DET	DET	DET	TBA	TBA	DC	DC	DC						
CHANNEL 1		C1 PIN	55	44	77	48	57	46	79	50	61		75	73	74	52					
		FUNCTION																			
		FIELD TERM	TB3 3,4	TB3 7,8	TB3 11,12	TB5 3,4	TB5 7,8	TB5 11,12	TB7 3,4	TB7 7,8	TB7 11,12			TB9 5,6	TB9 8,9	TB9 11,12					
REVISION DATES																				FORSYTH COUNTY ENGINEERING DEPARTMENT	
GRESHAM SMITH AND PARTNERS																				SIGNAL PLANS	
WID 0208-1 (PHASE 5) FORSYTH COUNTY																				DRAWING No. 27-03	

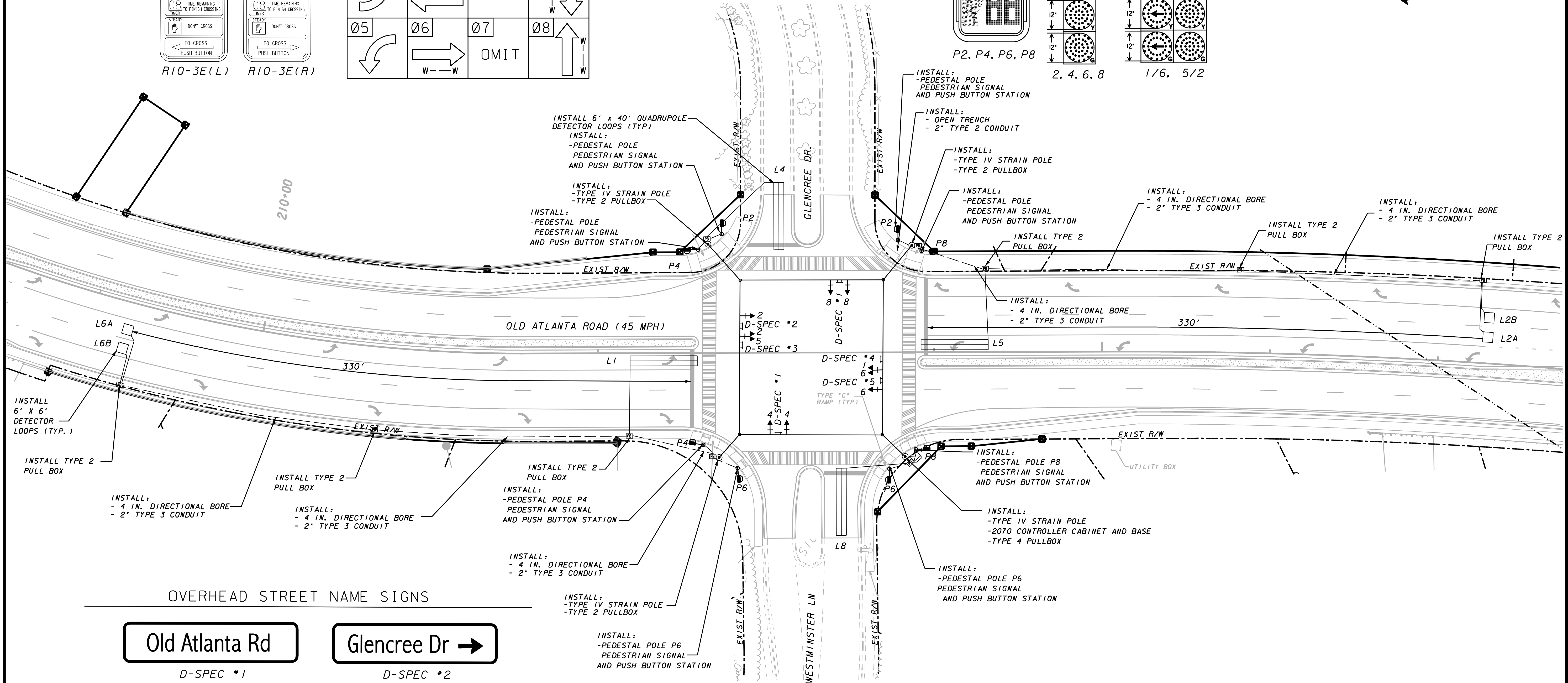
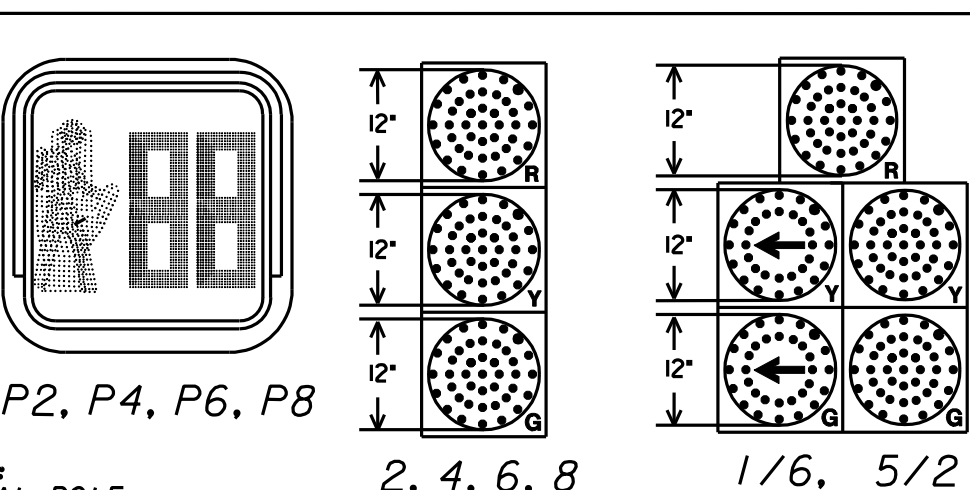
PEDESTRIAN SIGNS



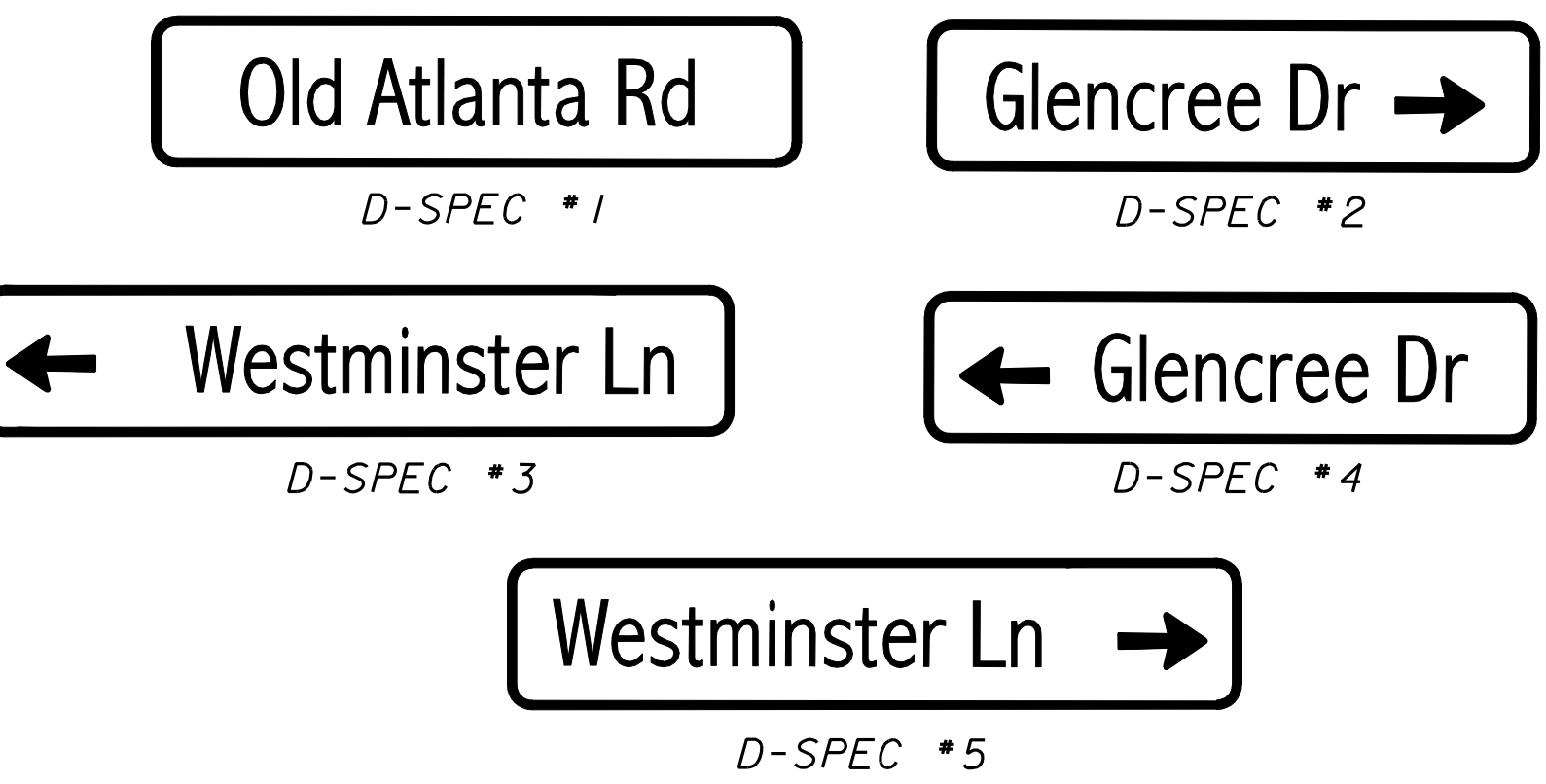
PHASING DIAGRAM



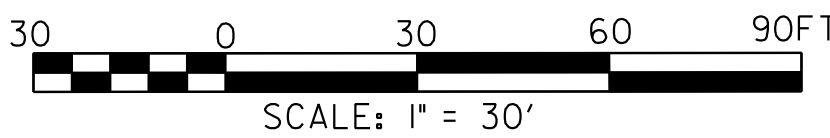
PROPOSED SIGNALS



OVERHEAD STREET NAME SIGNS



GRESHAM
SMITH AND
PARTNERS



REVISION DATES

FORSYTH COUNTY
ENGINEERING DEPARTMENT

SIGNAL PLANS

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
27-04

\$DATE\$

\$USER

\$TIMES

\$PRF\$

\$TBL\$

\$DGN\$

COUNTY

FORSYTH

PROJECT NUMBER

WID 0208-1

SHEET NO.

TOTAL SHEETS

TRAFFIC SIGNAL INSTALLATION NO. 2

INTERSECTION: WESTMINSTER LN @ OLD ATLANTA RD.
(SEE SHEET 27-04)

ESTIMATED QUANTITIES

615-1200	Directional Bore, 4 IN	Lin Ft	690
647-1000	Traffic Signal Installation No. 2	Lump	Lump
639-2002	Steel Wire Cable, 3 /8 IN	Lin Ft	695
682-6233	Conduit, Nonmetl, TP 3, 2 IN	Lin Ft	690
639-4004	Strain Pole, TP IV	Each	4

332 CABINET INPUT ASSIGNMENT

SLOT	1	2	3	4	5	6	7	8	9	10	11	12	13	14
------	---	---	---	---	---	---	---	---	---	----	----	----	----	----

UPPER INPUT FILE

	TYPE	DET	DET	DET	DET	DET	DET	DET	DET	TBA	TBA	DC	DC	DC
	CARD	2 CHAN.	2 CHAN.				2 CHAN.					DC ISO	DC ISO	DC ISO
CHANNEL 1	C1 PIN	56	39	63	47	58	41	65	49	60	80	67	68	81
	FUNCTION	L1	L2A				L4					Ø2 PED	Ø6 PED	FLASH
	FIELD TERM	TB2 1,2	TB2 5,6	TB2 9,10	TB4 1,2	TB4 5,6	TB4 9,10	TB6 1,2	TB6 5,6	TB6 9,10		TB8 4,6	TB8 7,9	N/C

CHANNEL 2

	C1 PIN	56	43	76	47	58	45	78	49	62		53	69	70	82
	FUNCTION		L2B									Ø4 PED	Ø8 PED	STOP TIME	
	FIELD TERM	TB2 3,4	TB2 7,8	TB2 11,12	TB4 3,4	TB4 7,8	TB4 11,12	TB6 3,4	TB6 7,8	TB6 11,12		TB8 5,6	TB8 8,9	N/C	

LOWER INPUT FILE

	TYPE	DET	DET	DET	DET	DET	DET	DET	DET	TBA	TBA	DC	DC	DC
	CARD	2 CHAN.	2 CHAN.				2 CHAN.							
CHANNEL 1	C1 PIN	55	40	64	48	57	42	66	50	59		71	72	51
	FUNCTION	L5	L6A				L8							
	FIELD TERM	TB3 1,2	TB3 5,6	TB3 9,10	TB5 1,2	TB5 5,6	TB5 9,10	TB7 1,2	TB7 5,6	TB7 9,10		TB9 4,6	TB9 7,9	TB9 10,12

CHANNEL 2

	C1 PIN	55	44	77	48	57	46	79	50	61		75	73	74	52
	FUNCTION		L6B												
	FIELD TERM	TB3 3,4	TB3 7,8	TB3 11,12	TB5 3,4	TB5 7,8	TB5 11,12	TB7 3,4	TB7 7,8	TB7 11,12		TB9 5,6	TB9 8,9	TB9 11,12	

REVISION DATES

FORSYTH COUNTY
ENGINEERING DEPARTMENT

SIGNAL PLANS

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

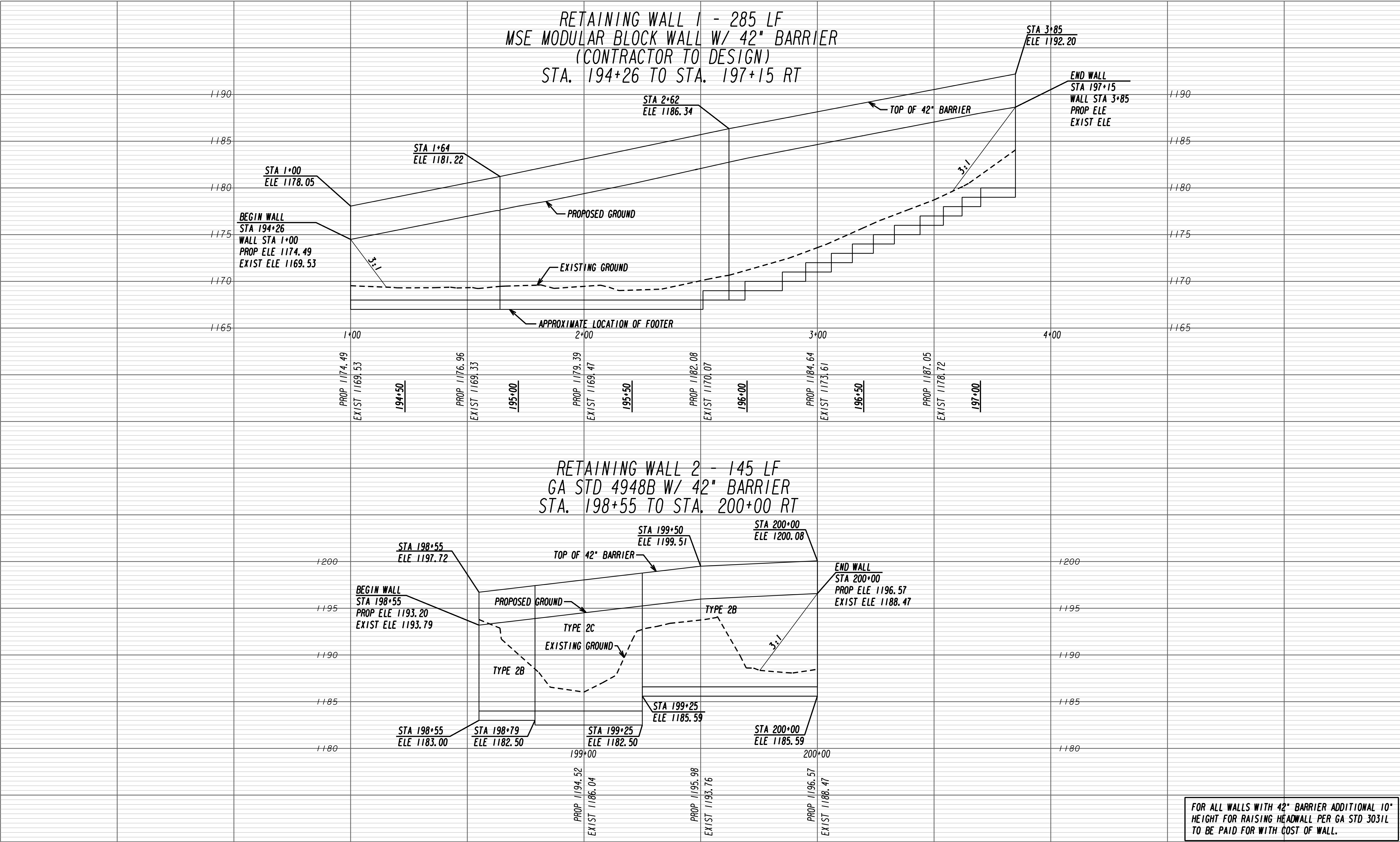
DRAWING No.
27-05

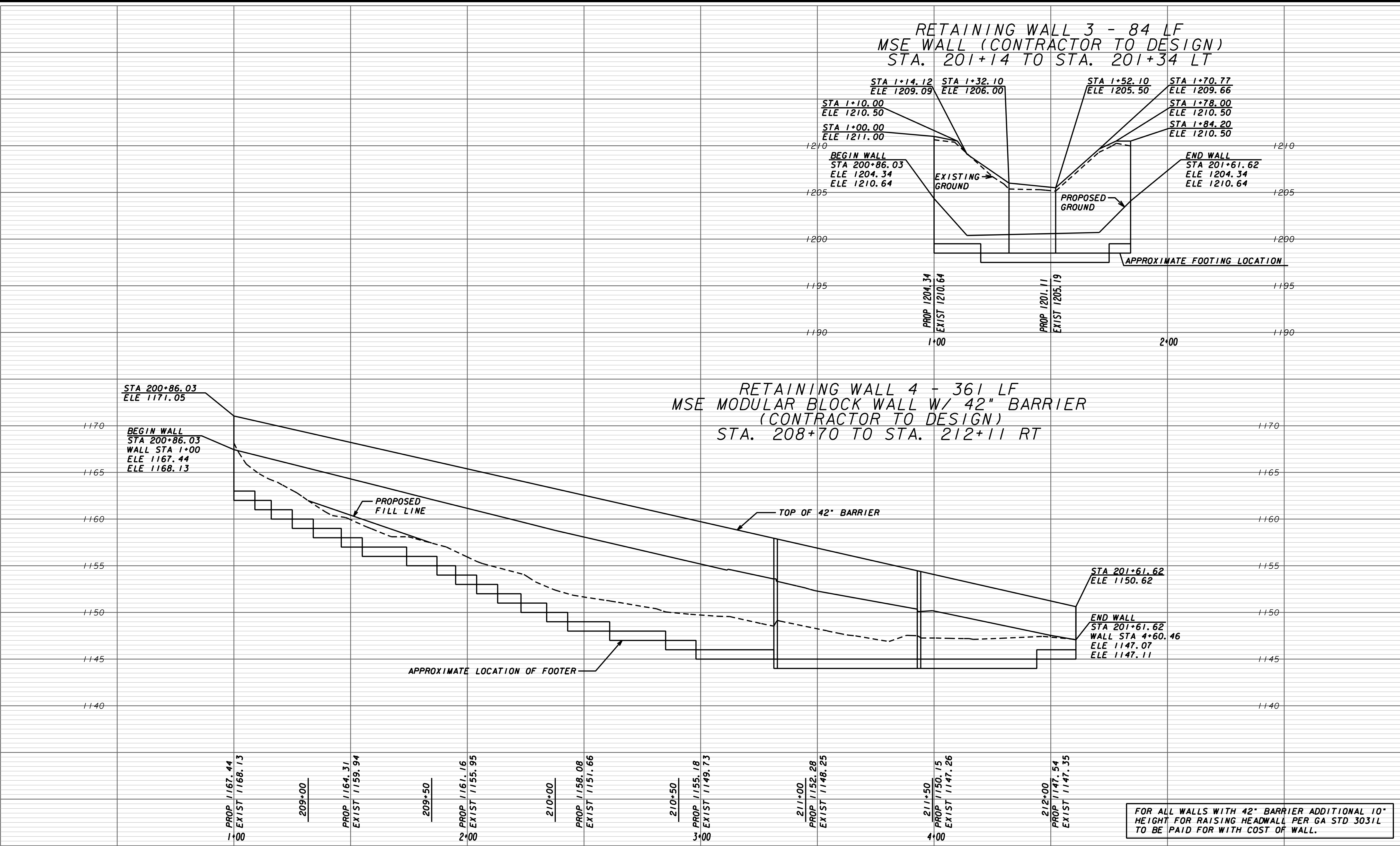
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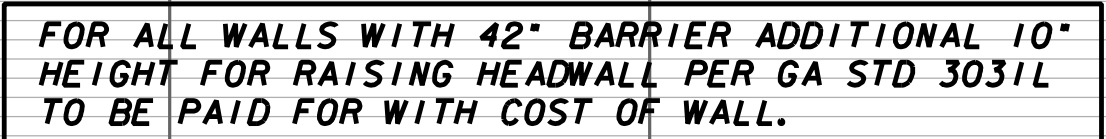
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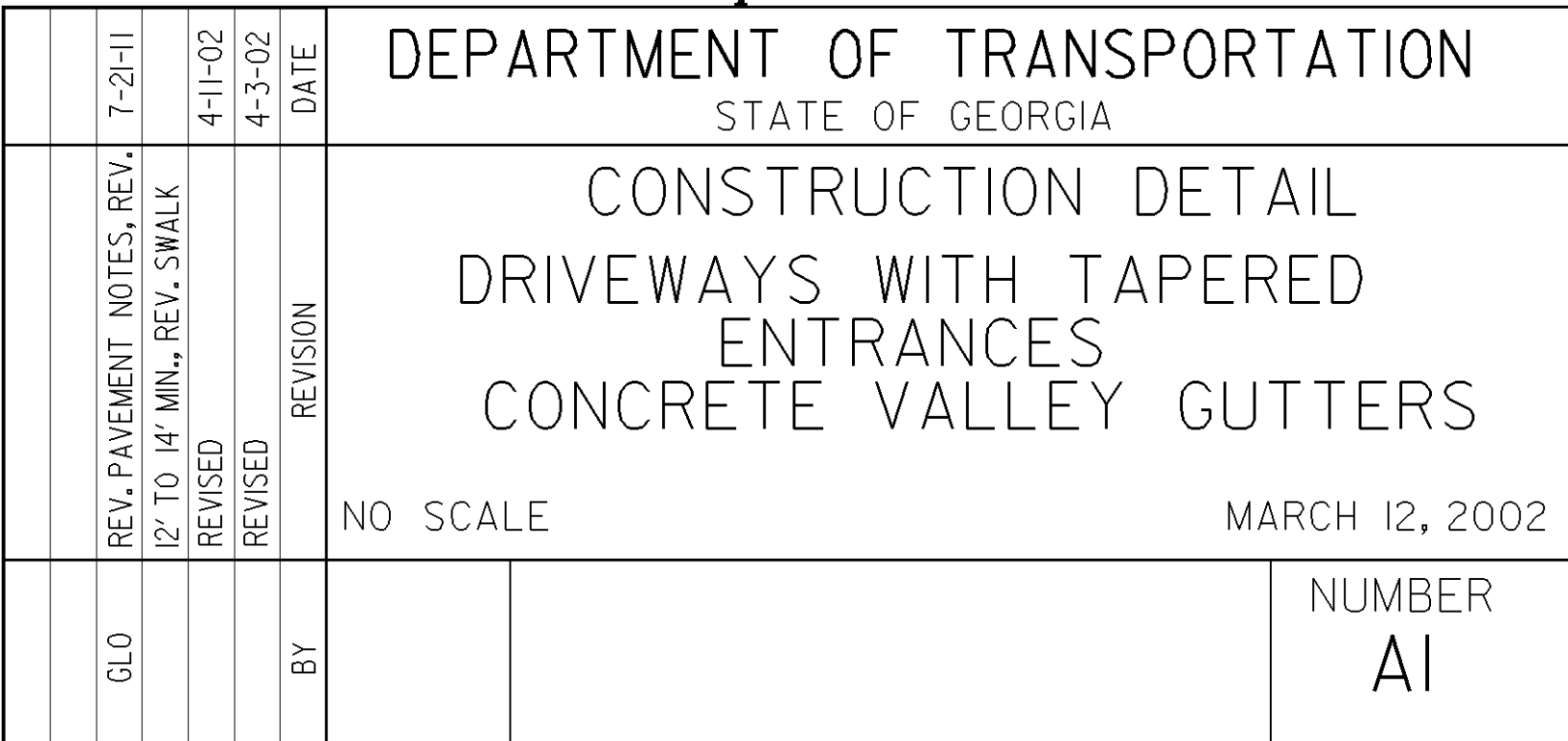
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G R E S H A M
S M I T H A N D
P A R T N E R S

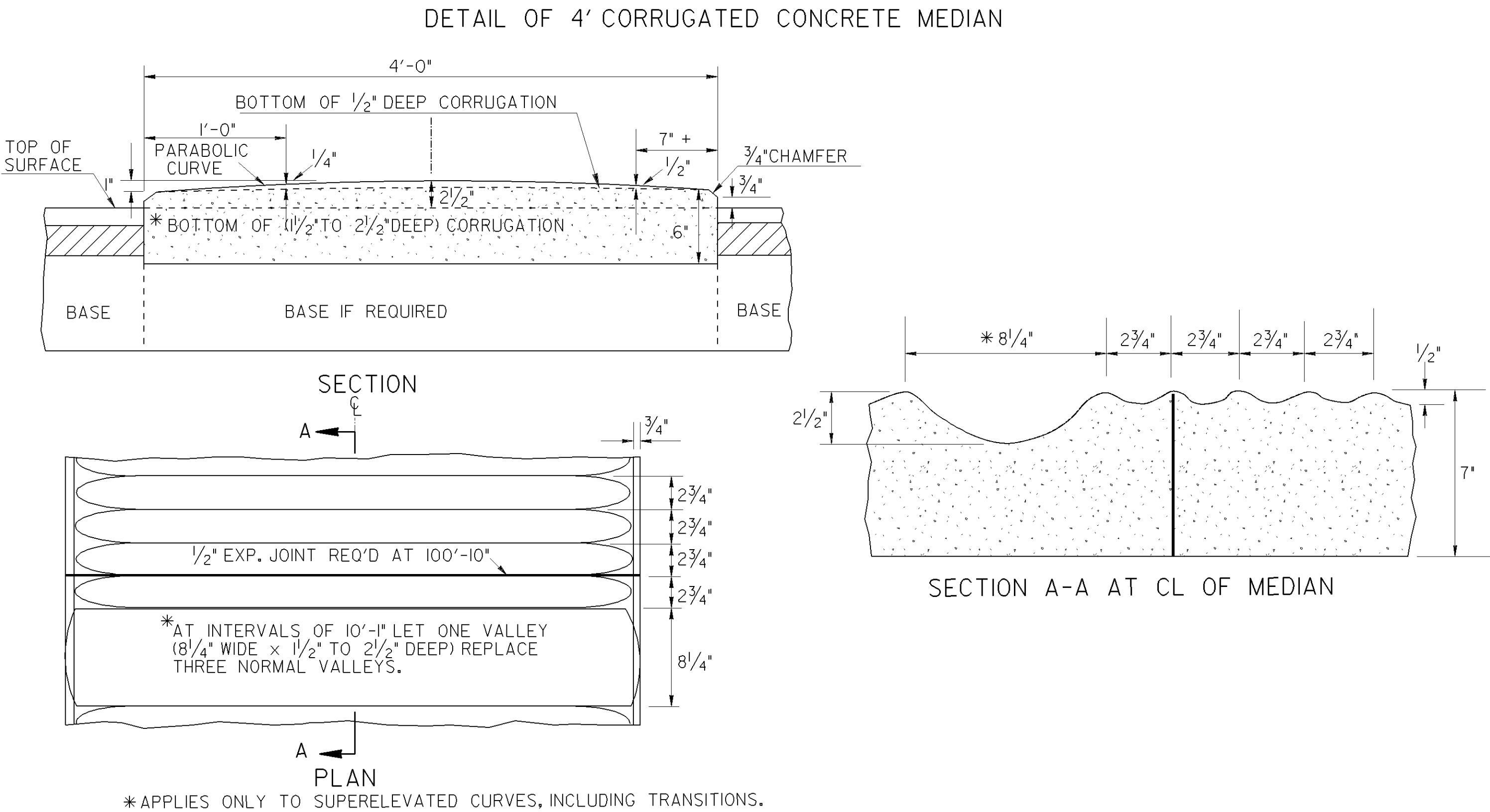
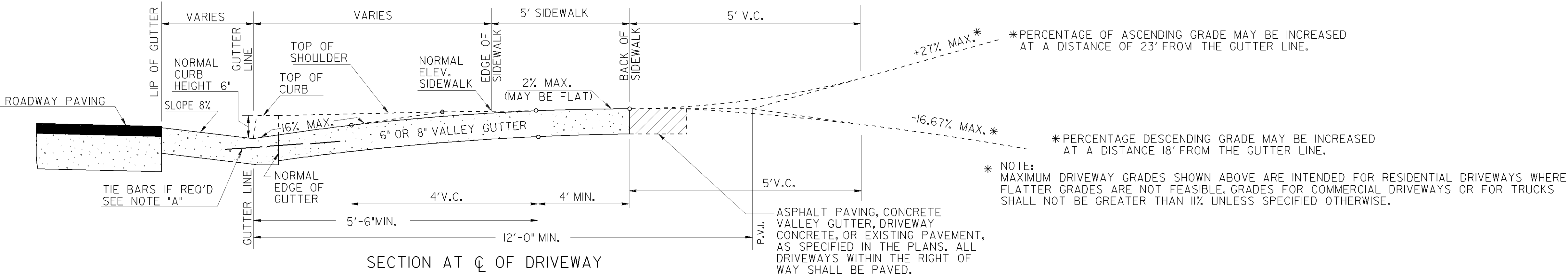
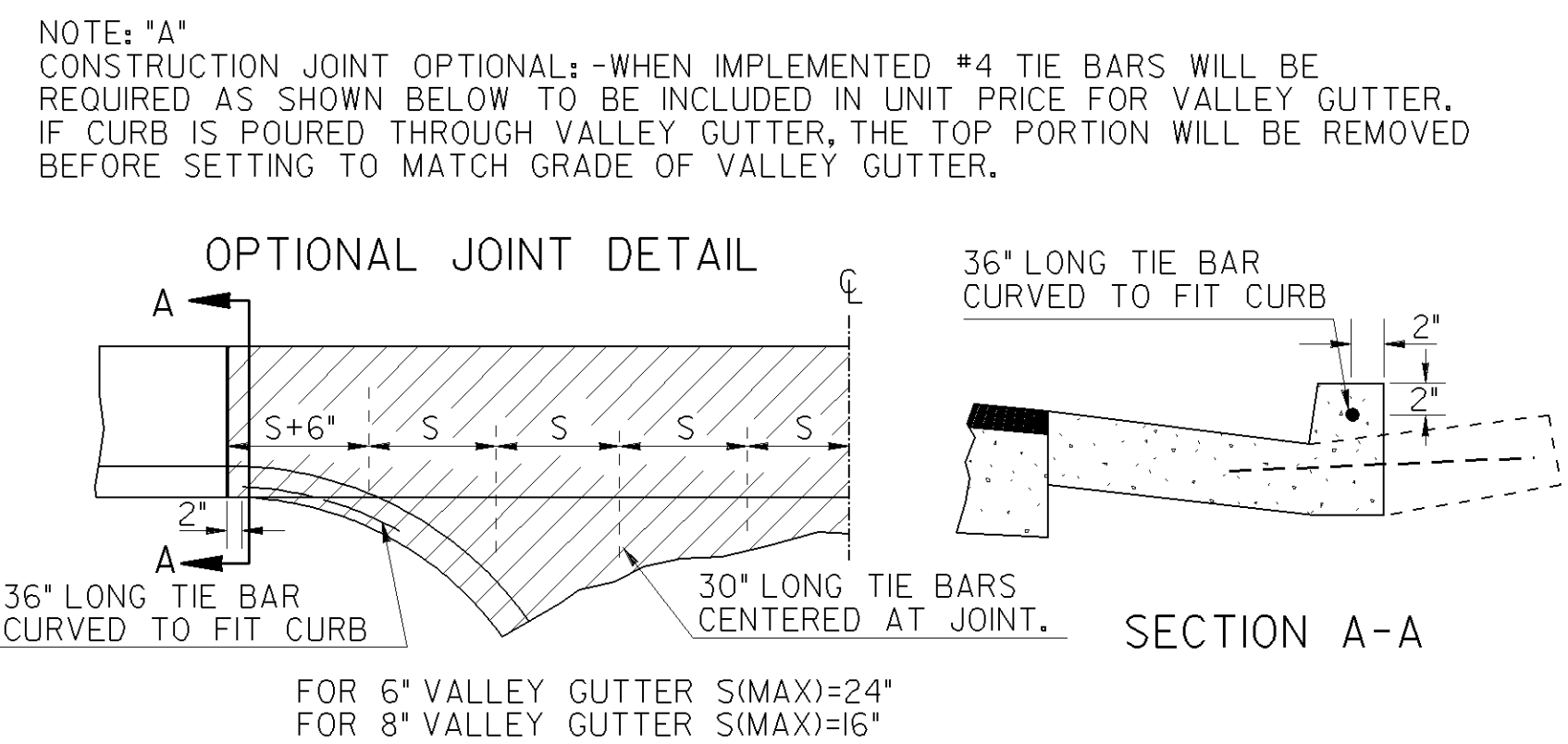
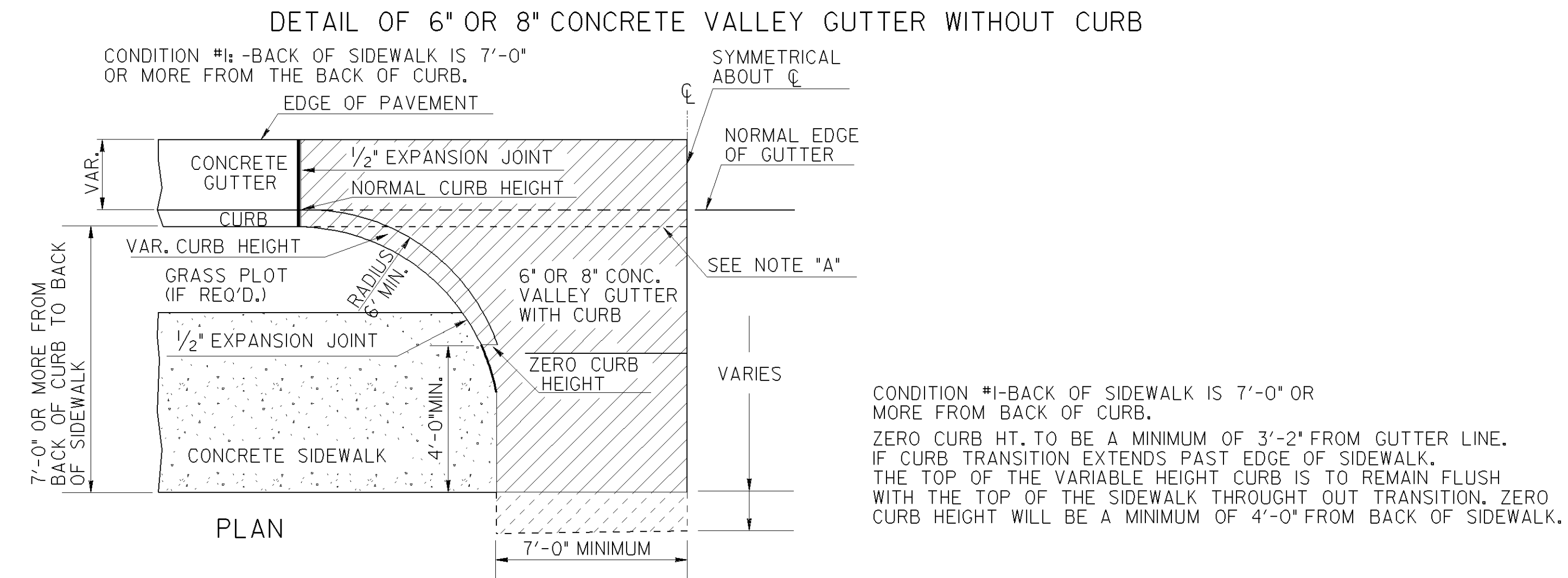
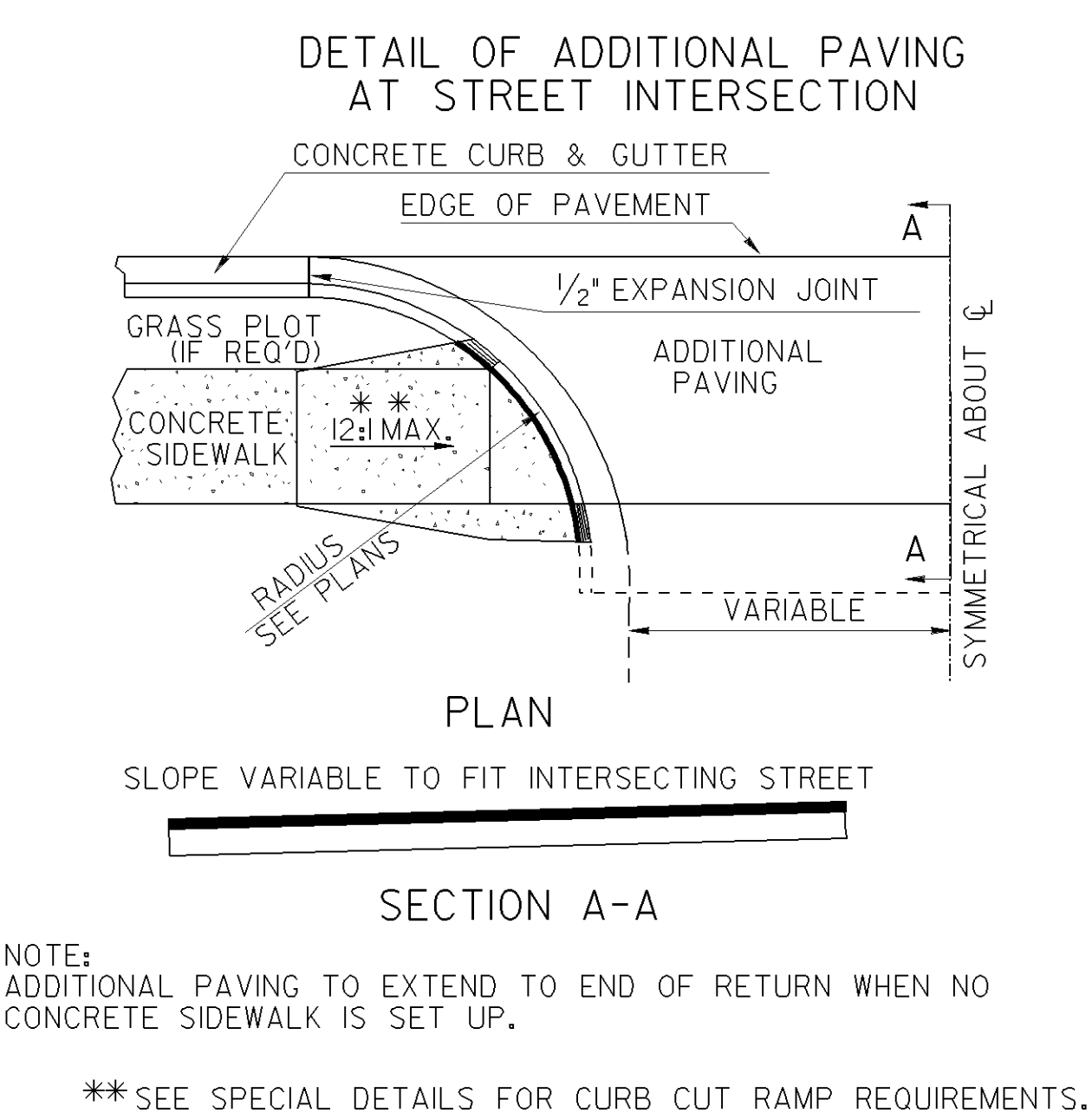
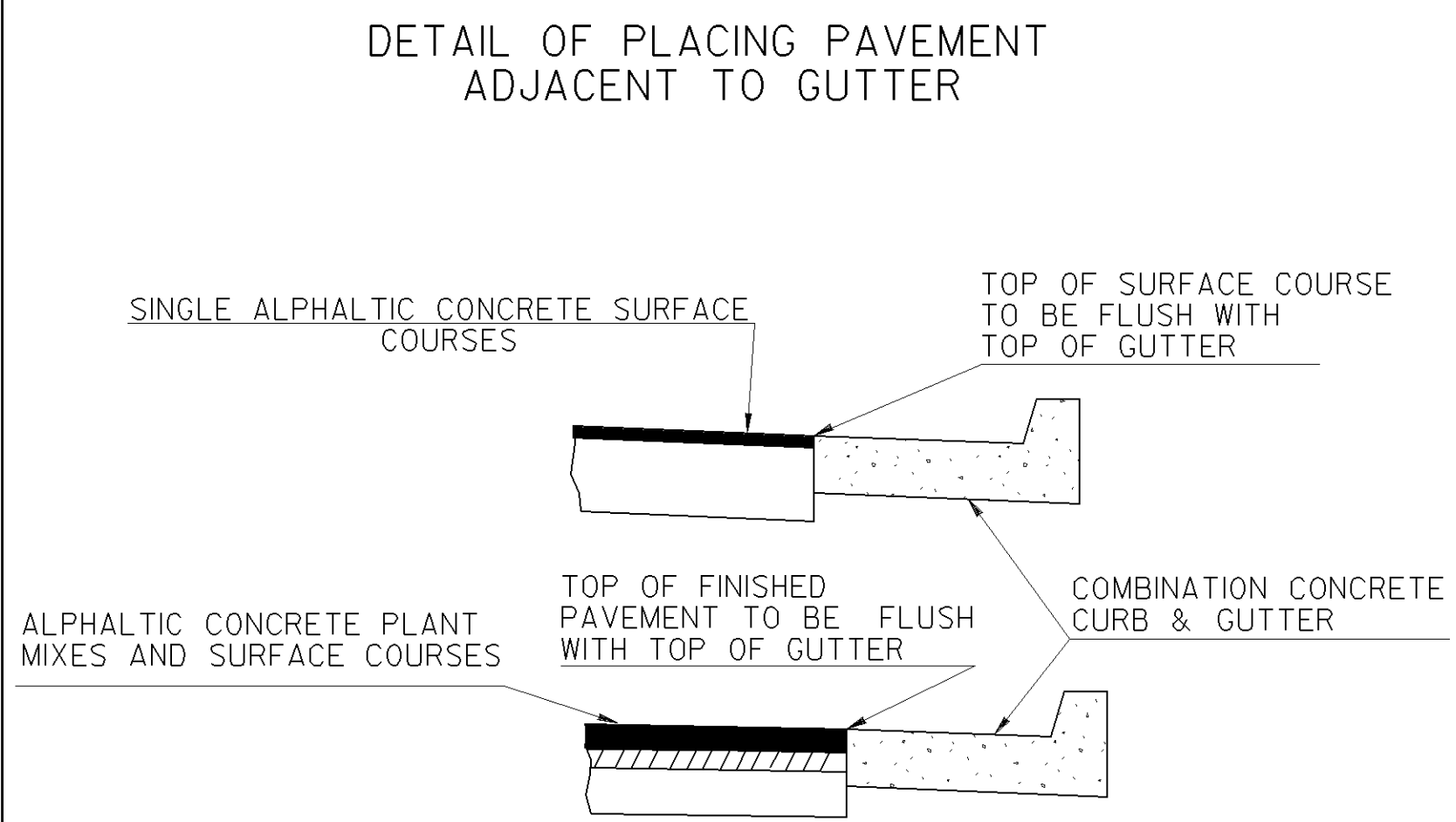
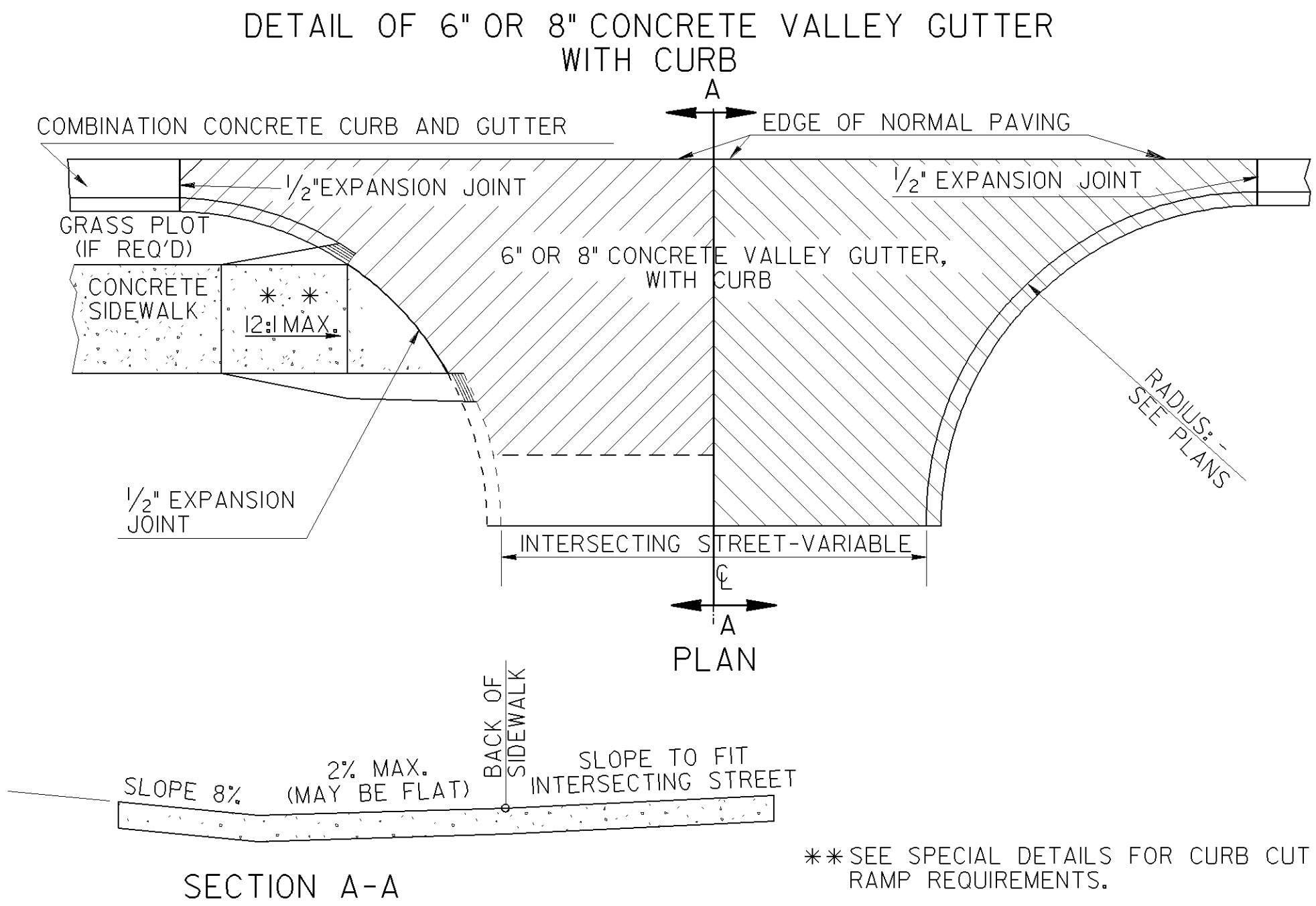








STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.			

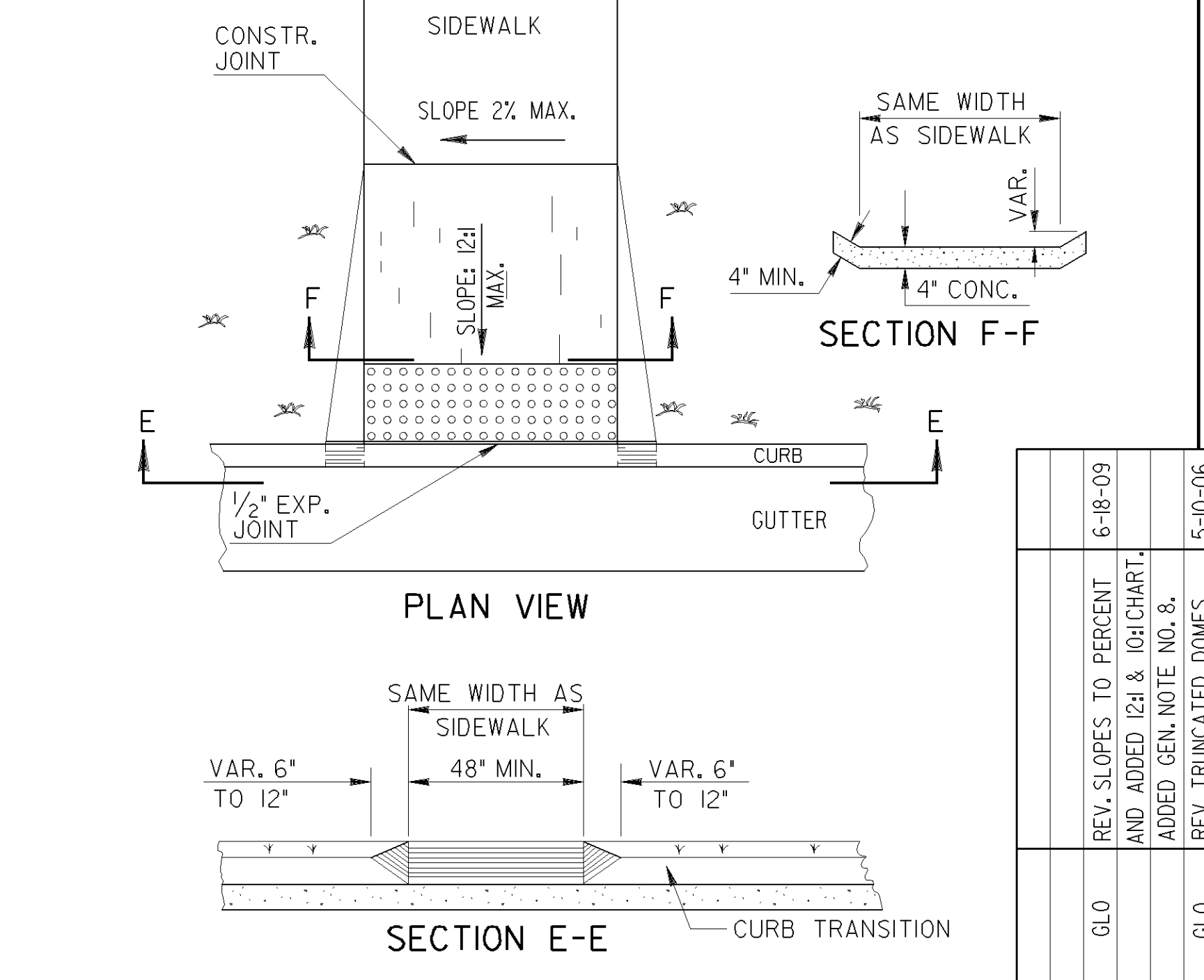
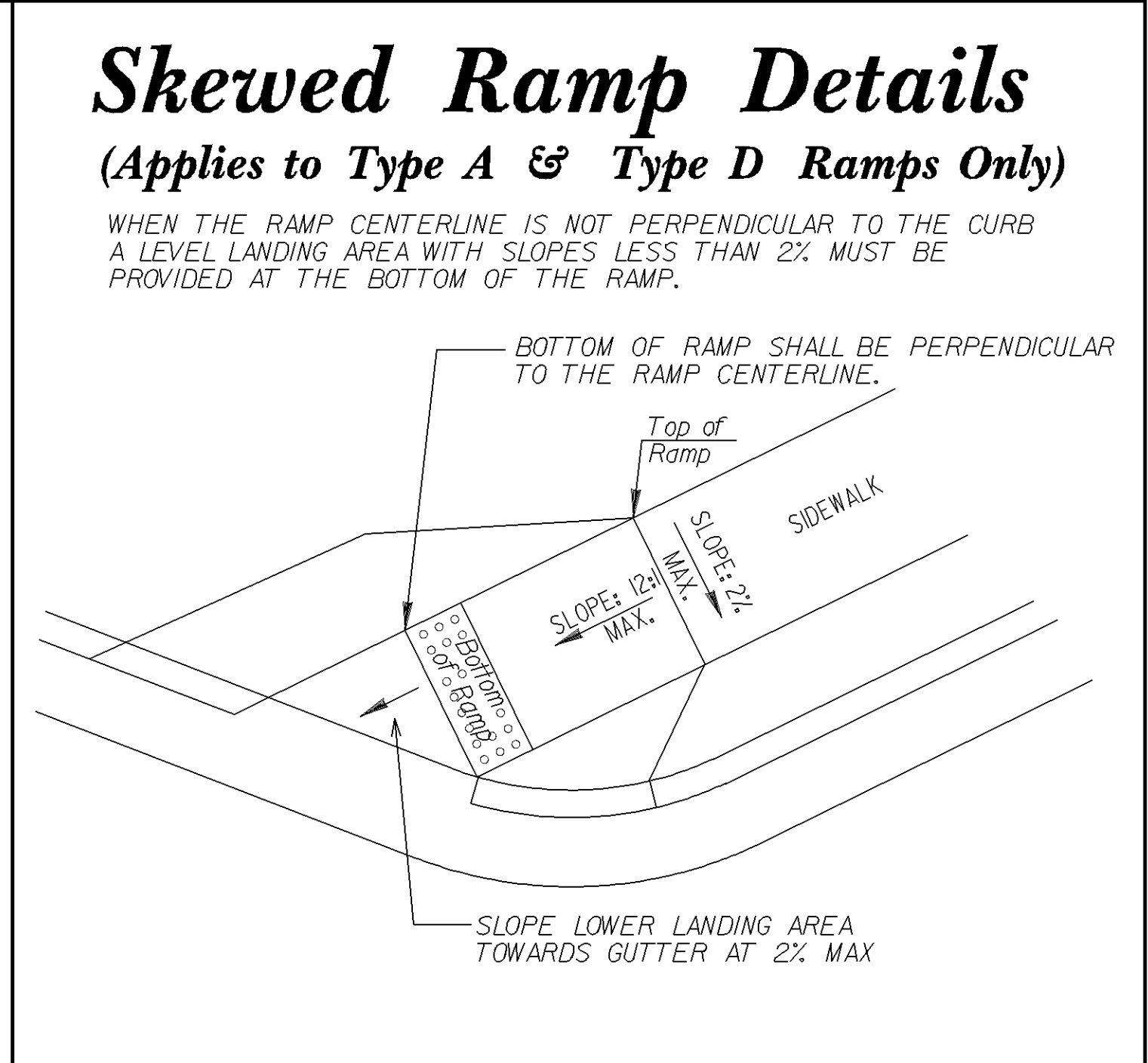
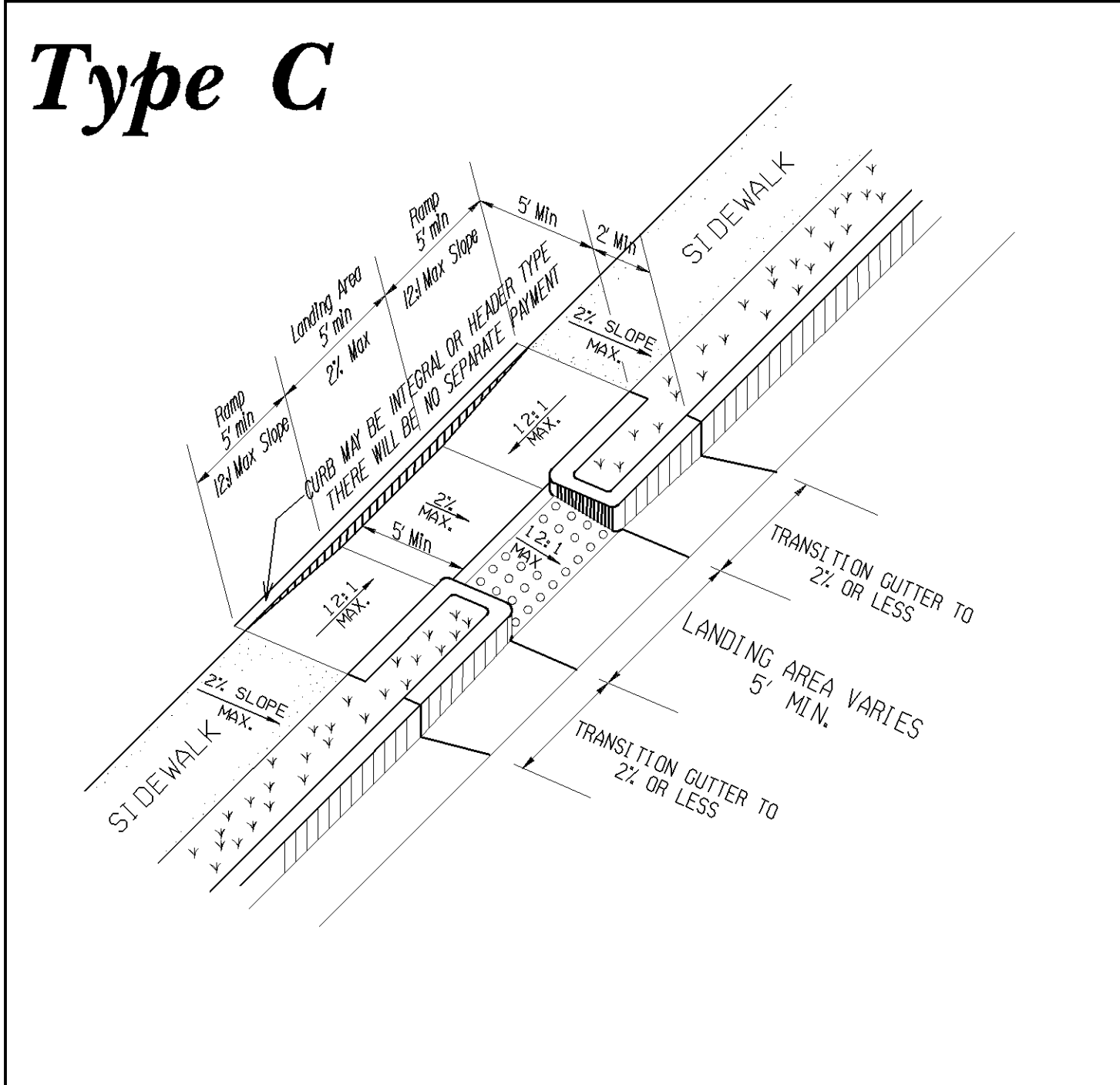
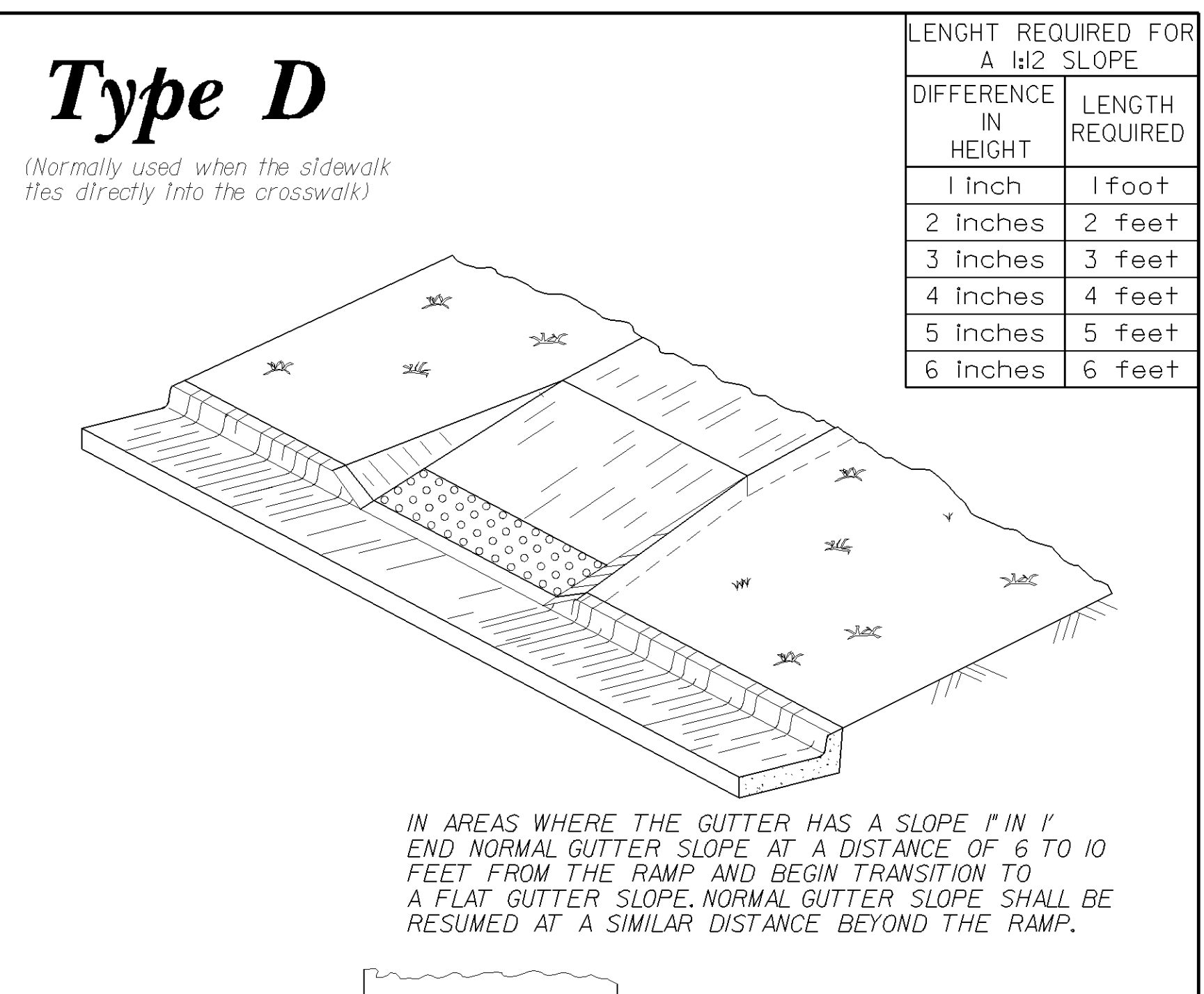
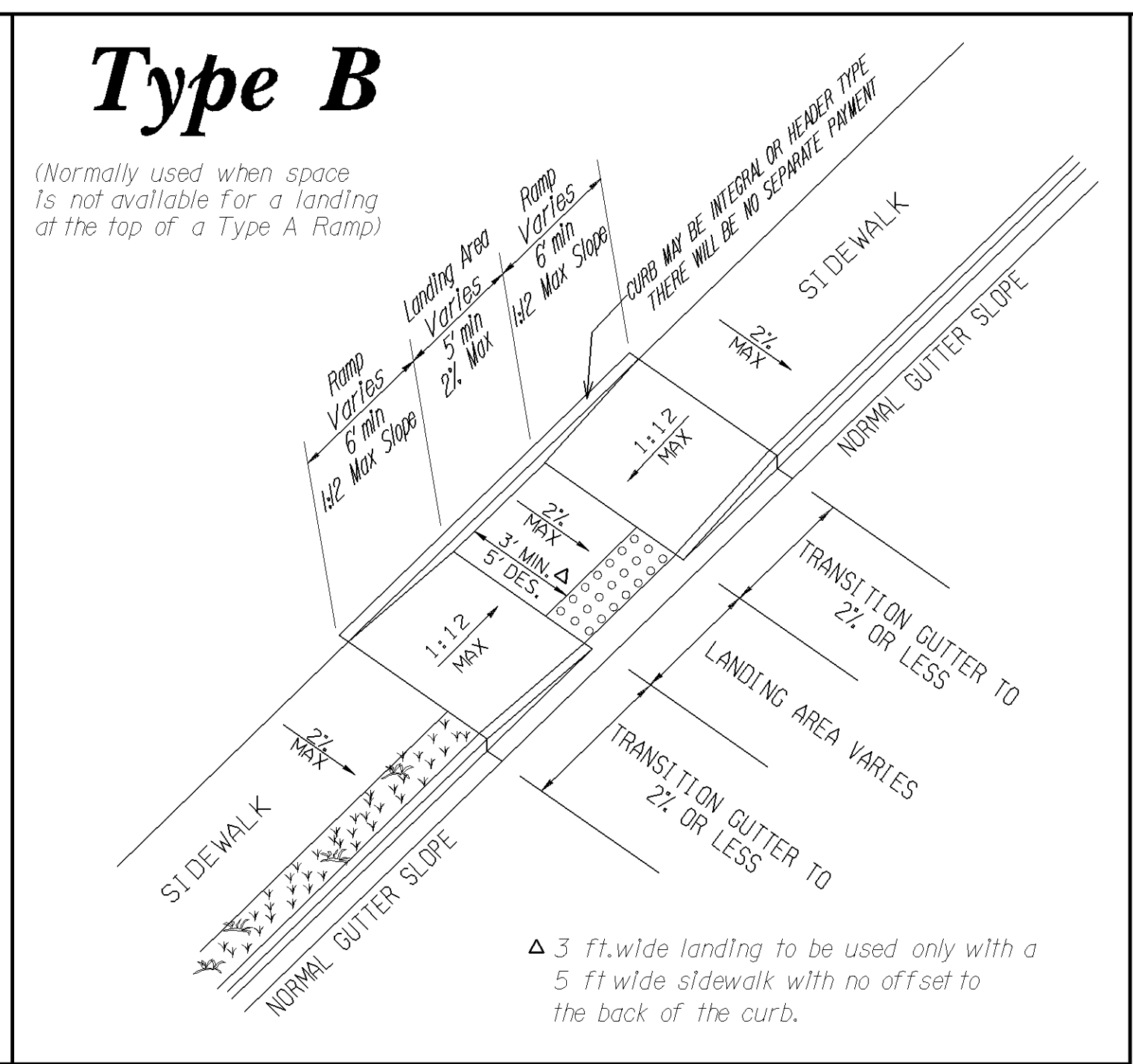
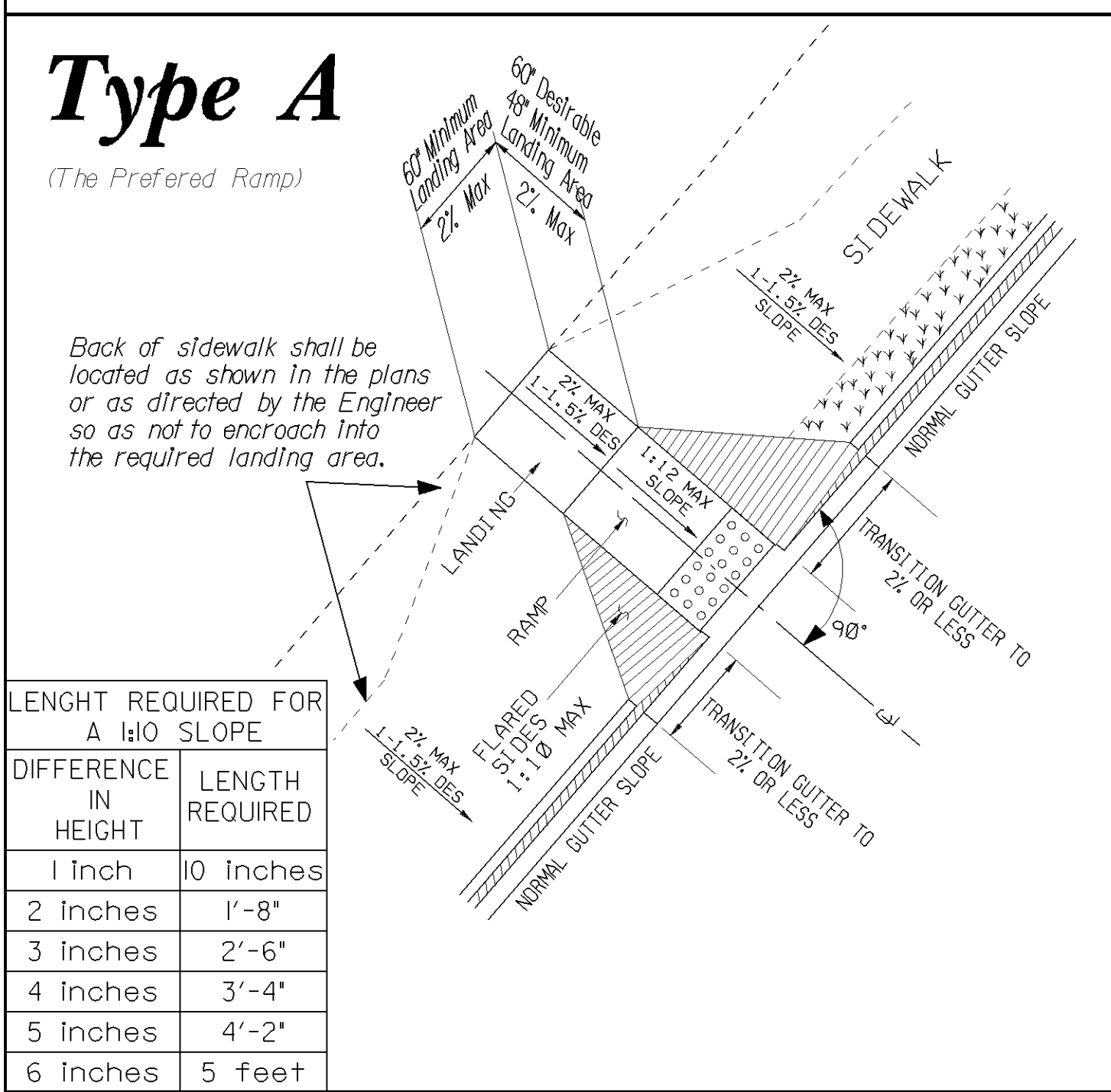
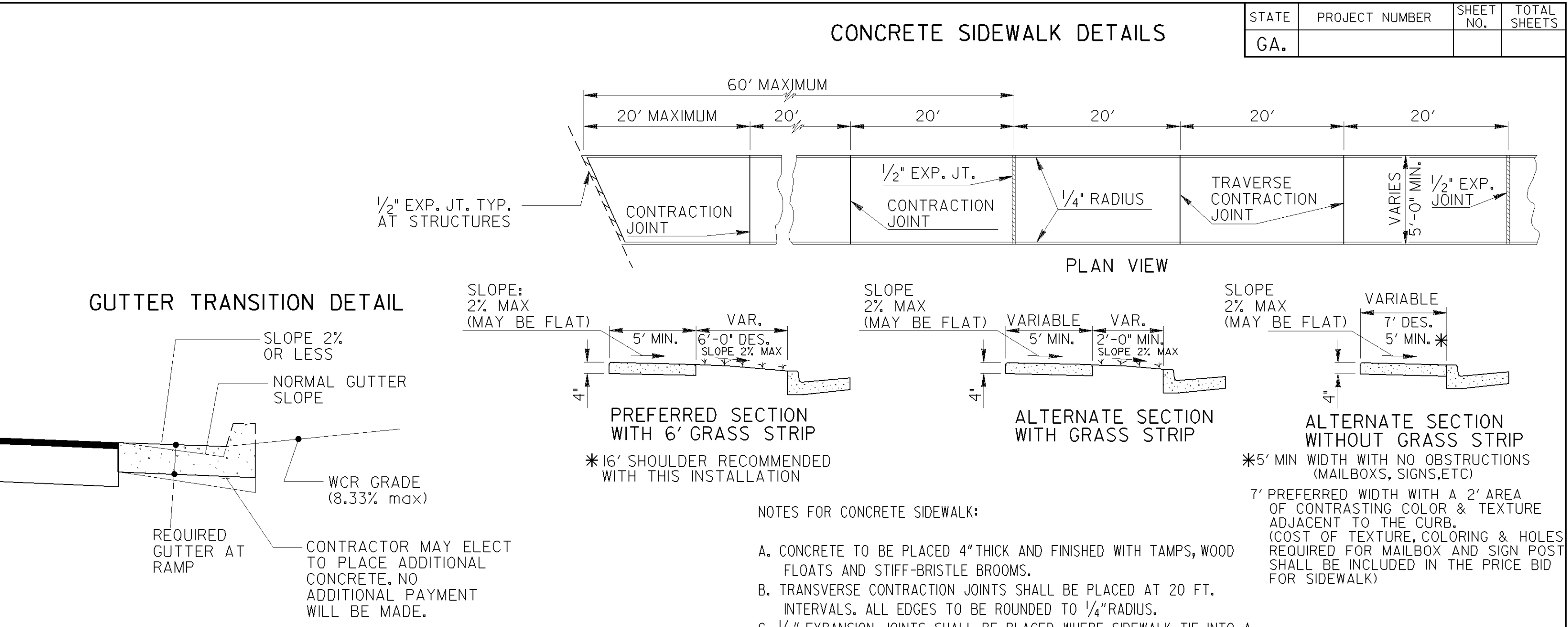
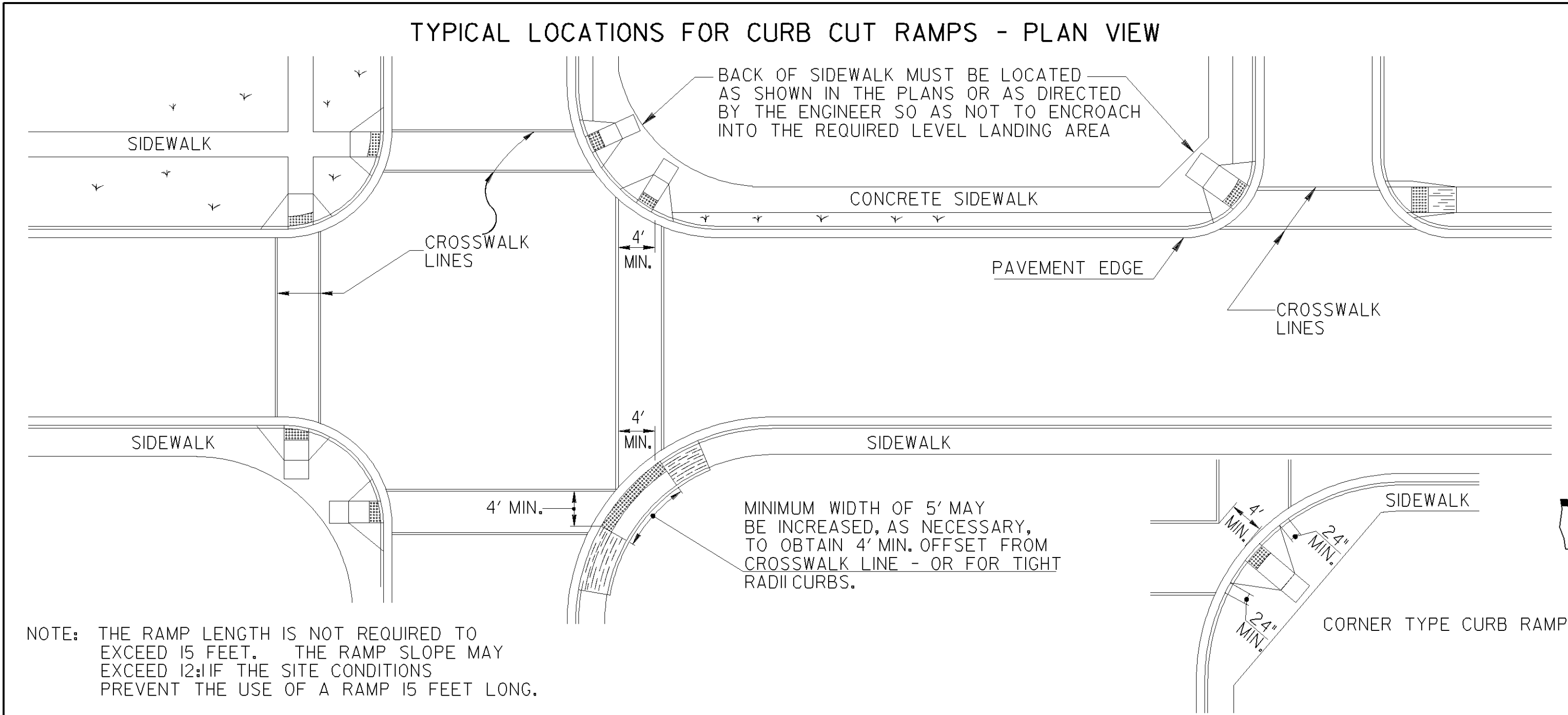


This Detail Replaces Ga Standard 9031J

Guidelines For Usage On Metric Projects

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

ADDED PAVEMENT NOTE, REV	DRIVEWAY SECTION	REV. PAYMENT NOTES	REVISED	REVISED	DATE	REVISION
GLO	GLO	GLO	GLO	GLO	GLO	GLO
7-21-11	2-21-03	4-11-02	4-11-02	4-11-02	4-11-02	4-11-02
DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA						
CONSTRUCTION DETAIL						
CONCRETE VALLEY GUTTER AT STREET INTERSECTION 6" OR 8" CONCRETE VALLEY GUTTER AT DRIVE PLACING PAVEMENT ADJACENT TO GUTTER ADDITIONAL PAVING AT STREET INTERSECTION 4' CORRUGATED CONCRETE MEDIAN						
NO SCALE						
MARCH 12, 2002						
NUMBER						
A2						



NOTES FOR CURB CUT RAMPS:

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

This Detail Replaces Ga Standard 9031W
Guidelines For Usage On Metric Projects

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REV. SLOPES TO PERCENT AND ADDED 124 & 101 CHART.	REV. TRUNCATED DOMES	REVISED	REVISED	REVISED	REVISED	REVISED	REVISED	REVISED	REVISED	DATE
6-18-09	5-10-06	2-21-03	2-10-03	7-29-02	5-23-02	5-13-02	4-29-02	4-11-02	4-3-02	
GLO	GLO									

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

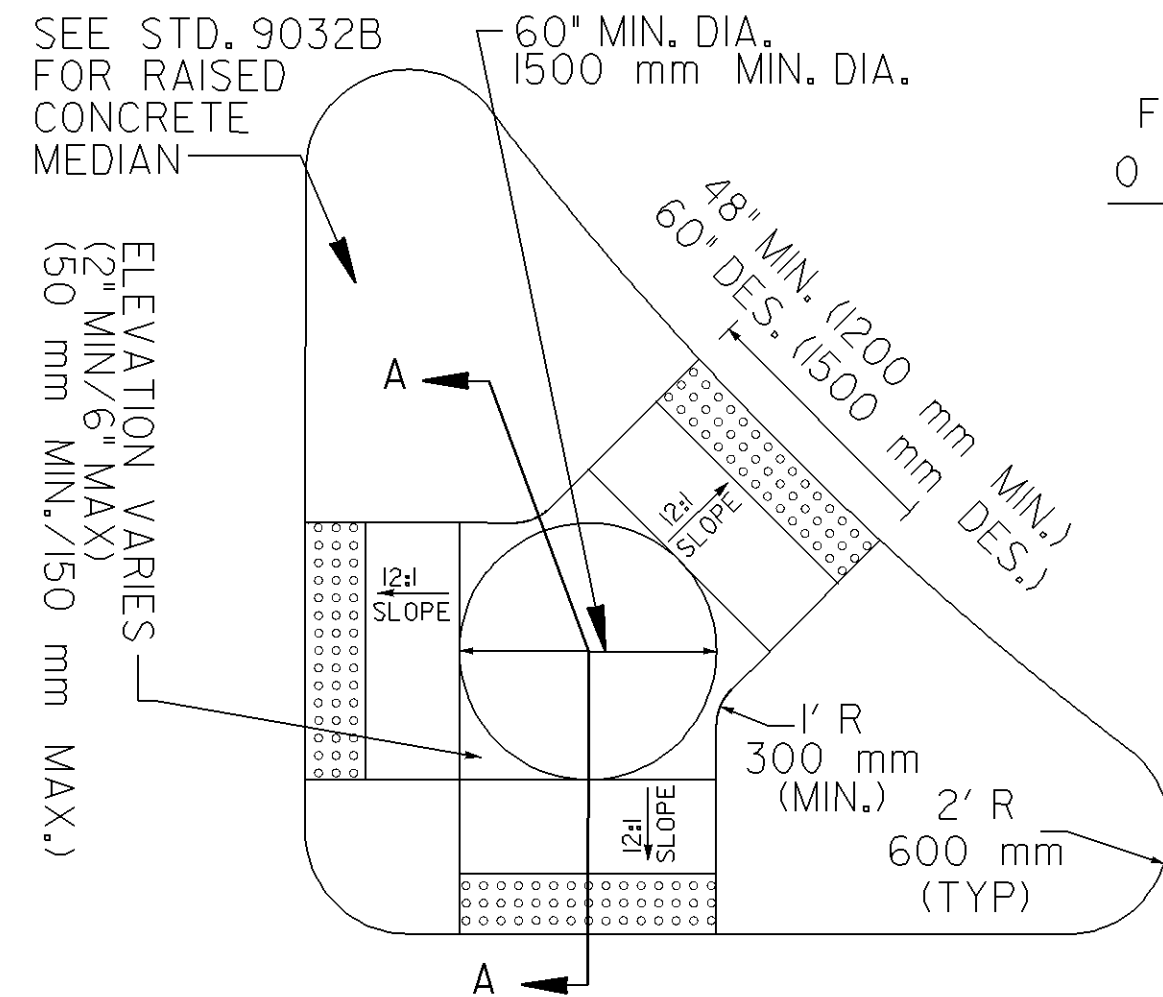
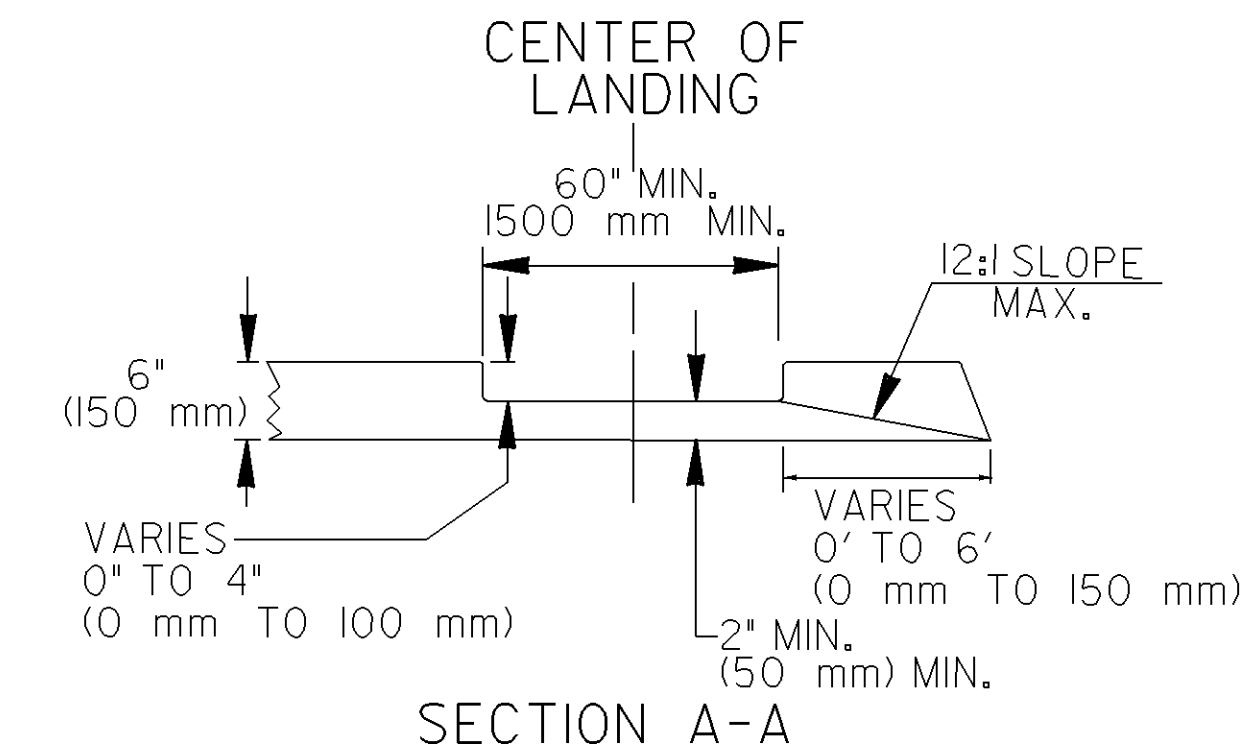
SPECIAL DETAIL
CONCRETE SIDEWALK DETAILS
CURB CUT (WHEELCHAIR) RAMPS

NO SCALE

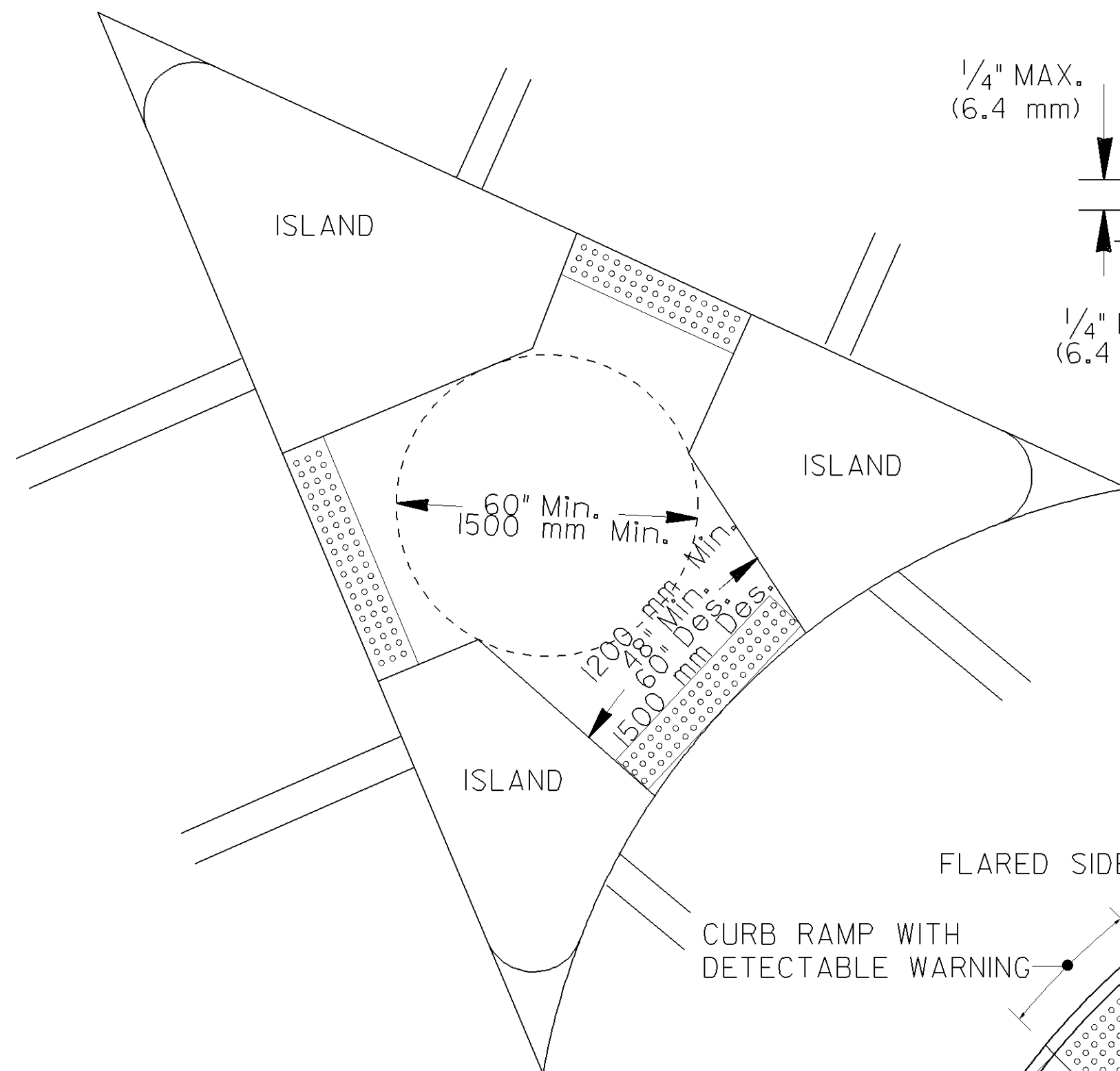
MARCH 12, 2002

NUMBER
A3

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.			

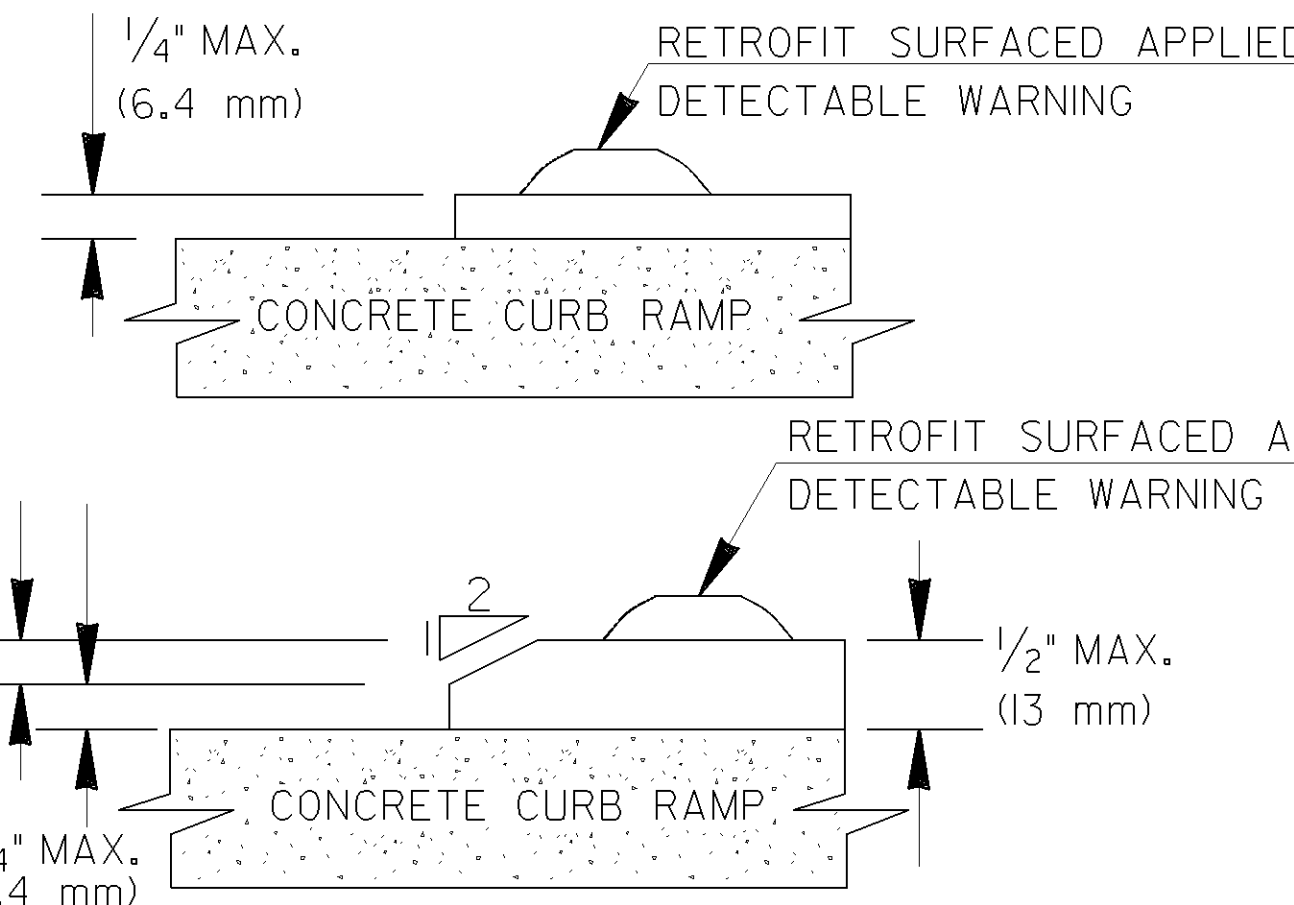
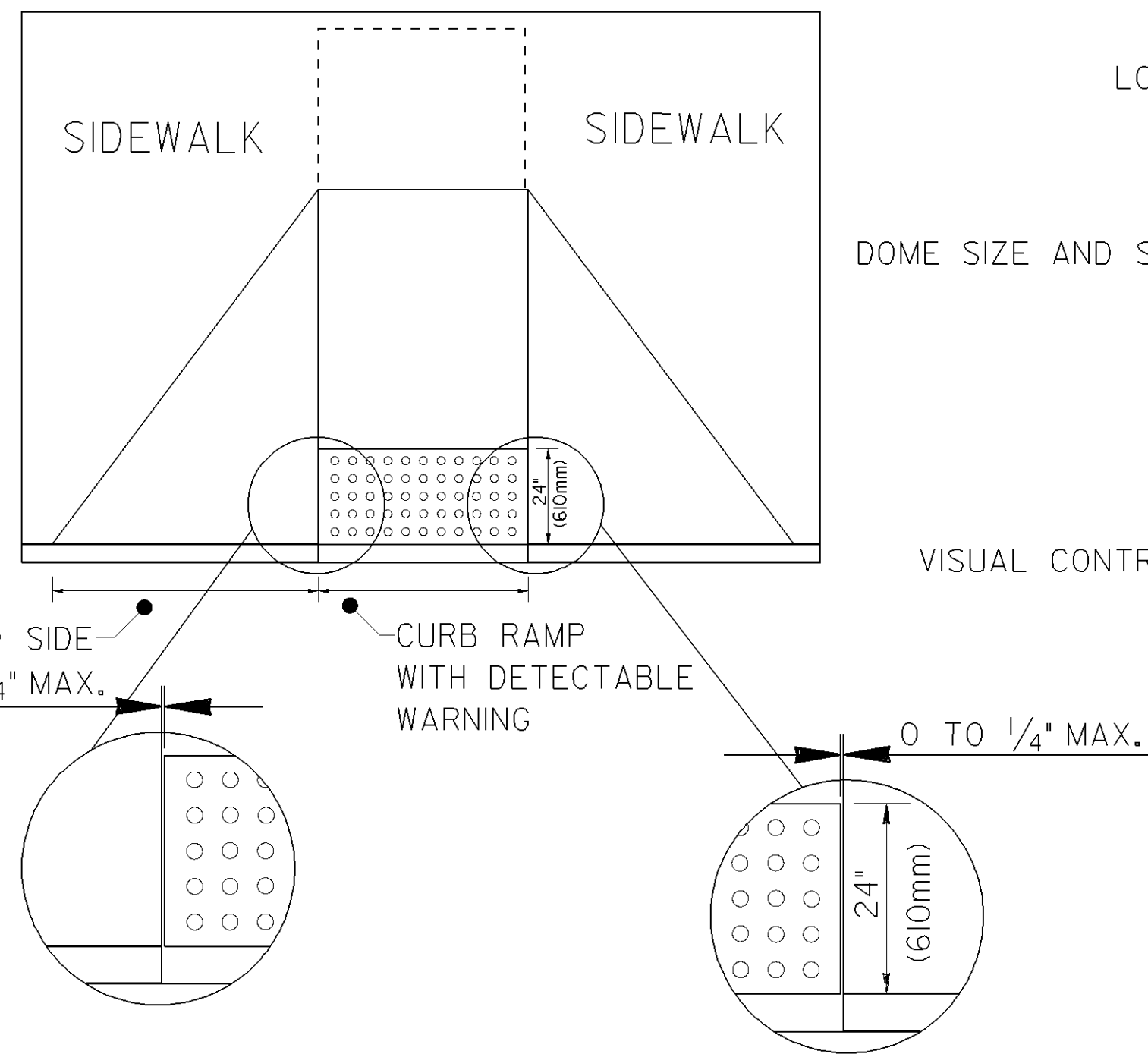


CONCRETE ISLAND WITH ELEVATED CUT THROUGH



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.



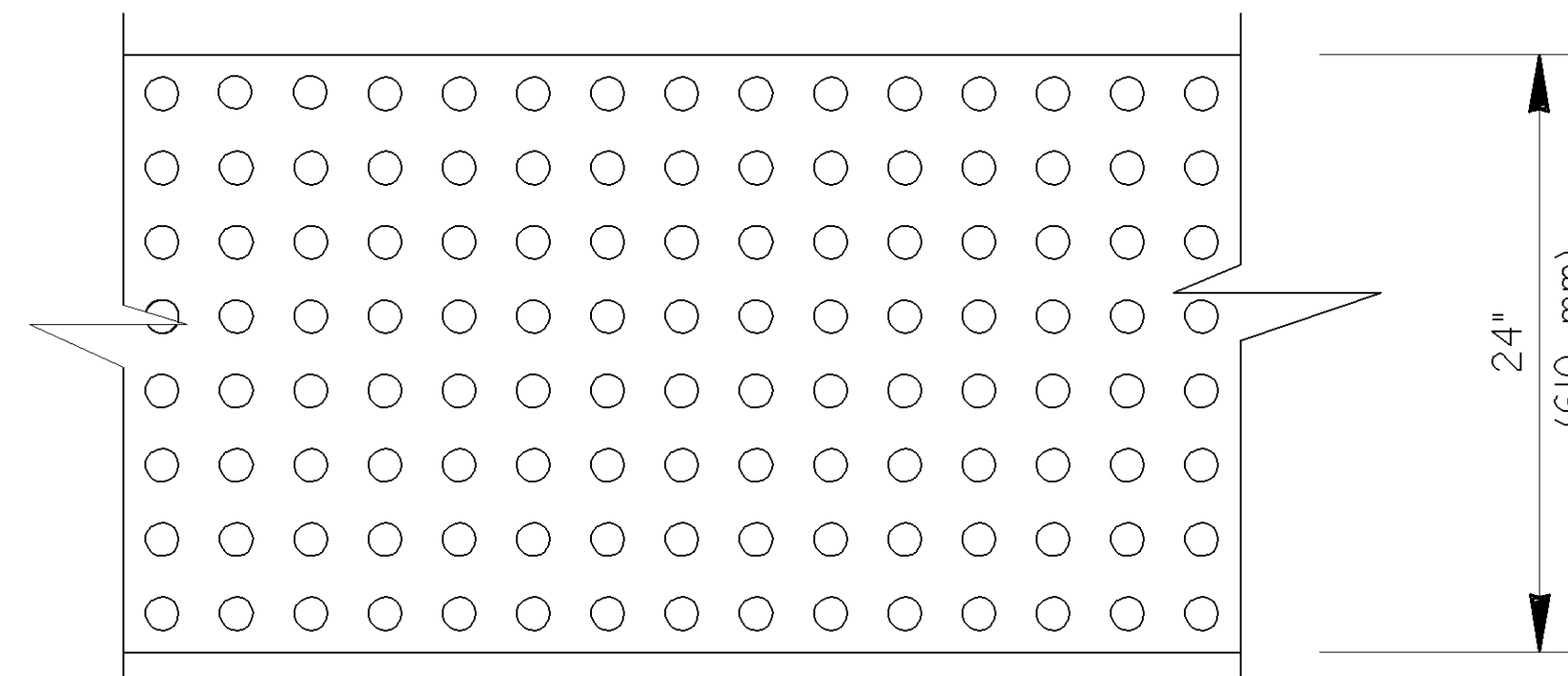
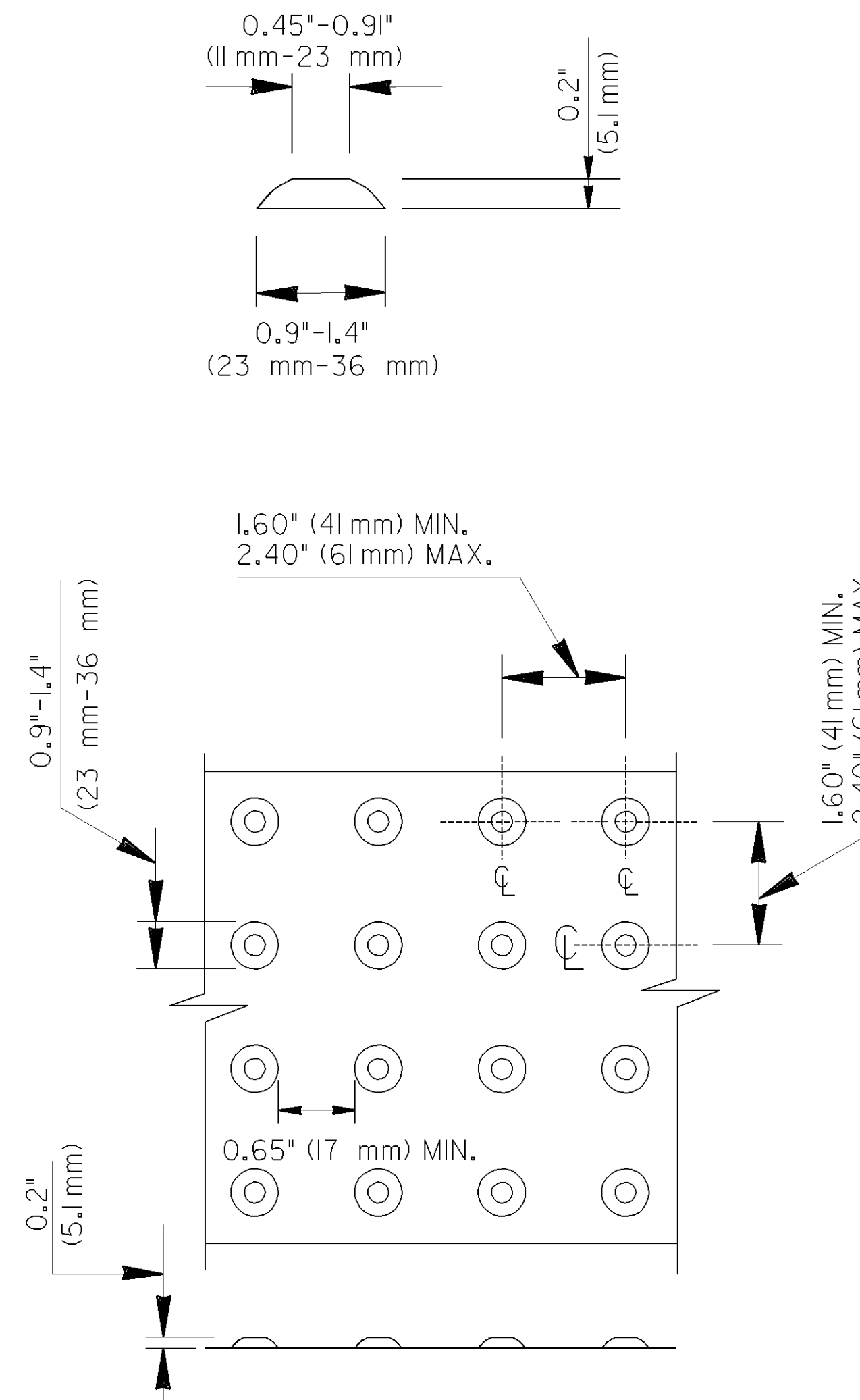
DETAIL FOR DETECTABLE WARNING AT CUT-THRU CONCRETE ISLAND

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.

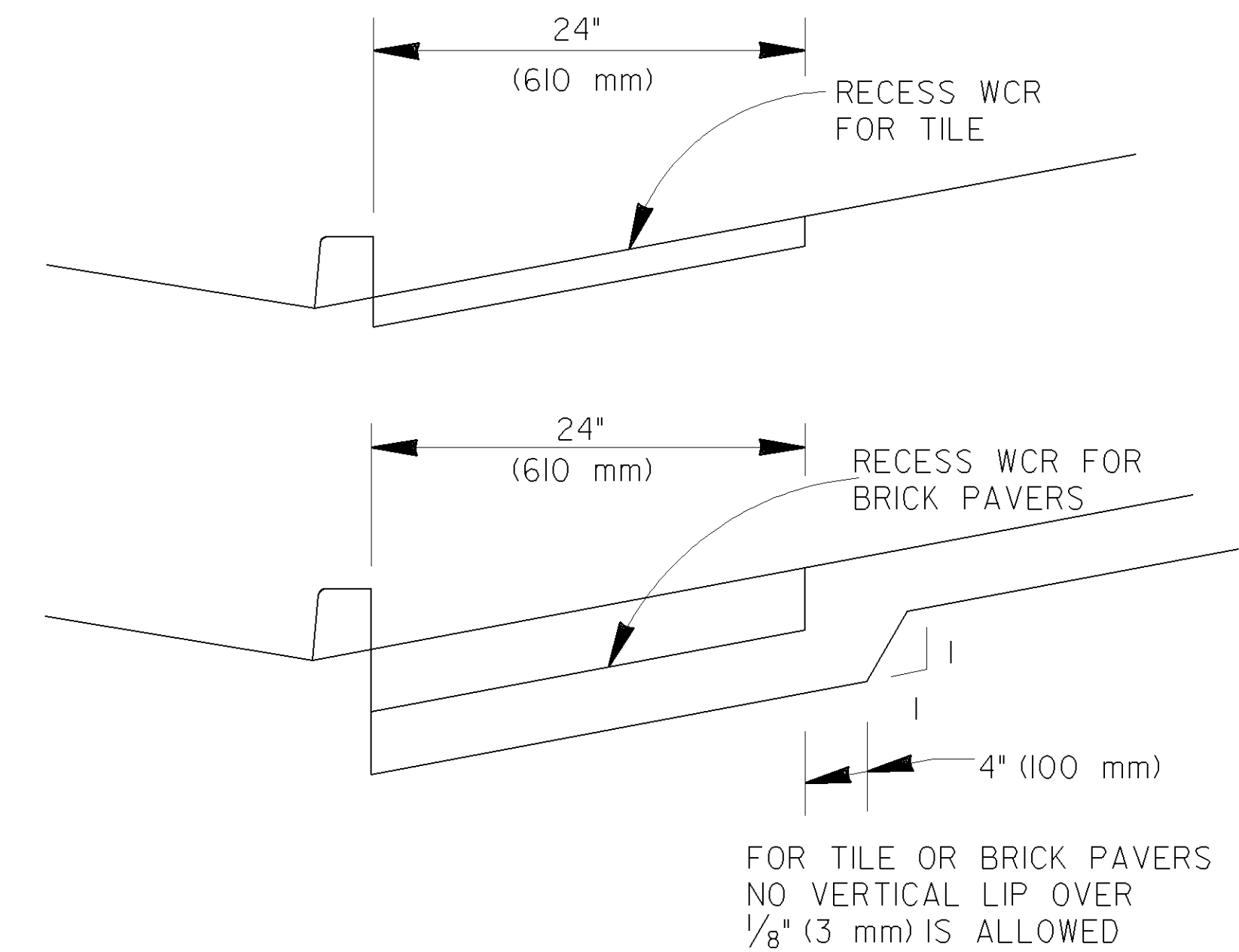
CERAMIC TILE SHALL BE EPOXIED IN PLACE OR SET IN A WET MORTAR BED. MANUFACTURER RECOMMEND ADHESIVE OR FASTENER SHALL BE USED IN THE INSTALLATION.

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			

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.			

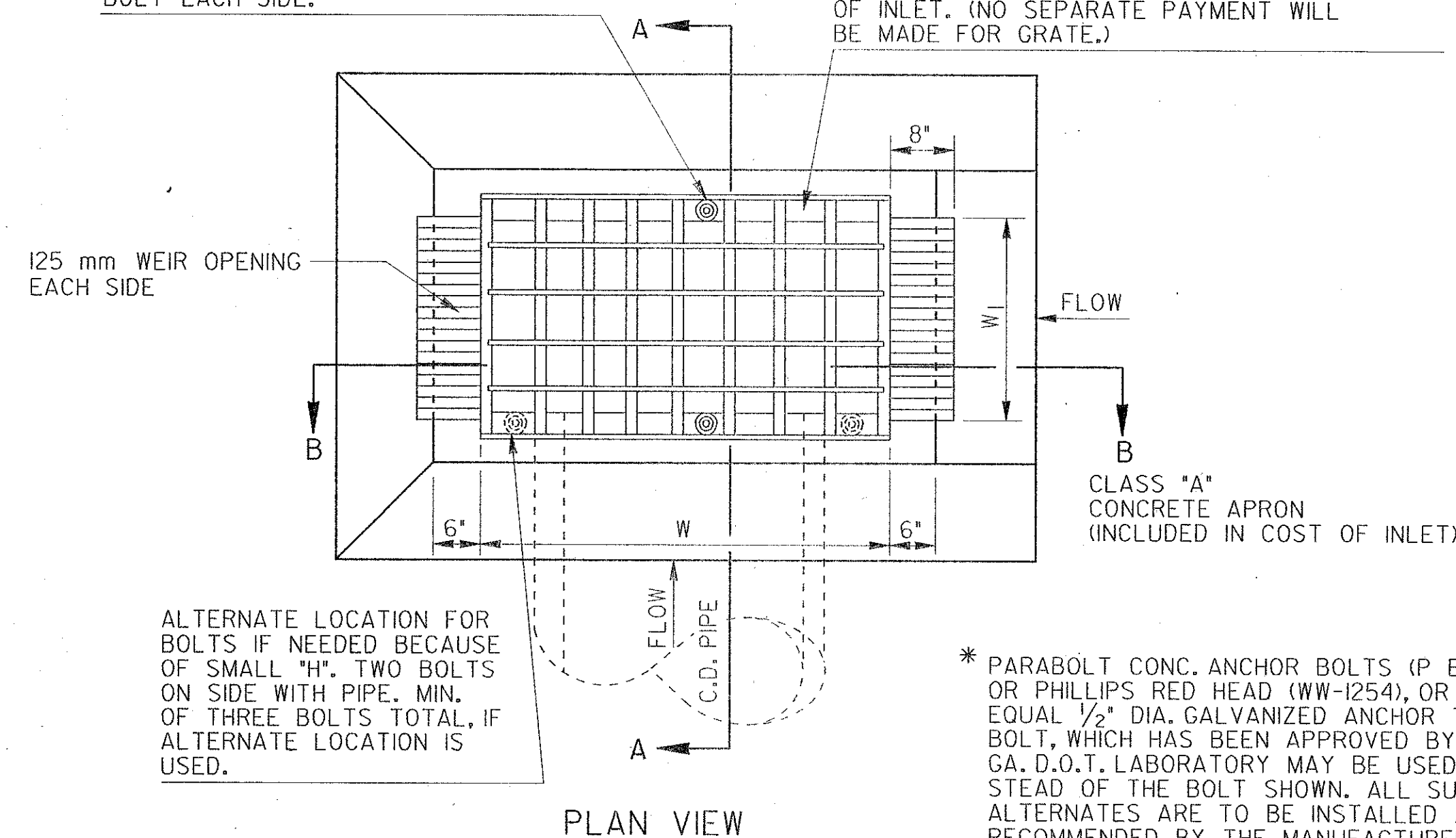
NOTE: MIN. 'H' IS BASED ON TYPICAL OUTSIDE DIAMETER OF CONCRETE PIPES
AND MAY BE REDUCED SLIGHTLY WHERE SPECIFIED IN THE PLANS, OR AS DIRECTED
BY THE ENGINEER.

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'-6"	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"

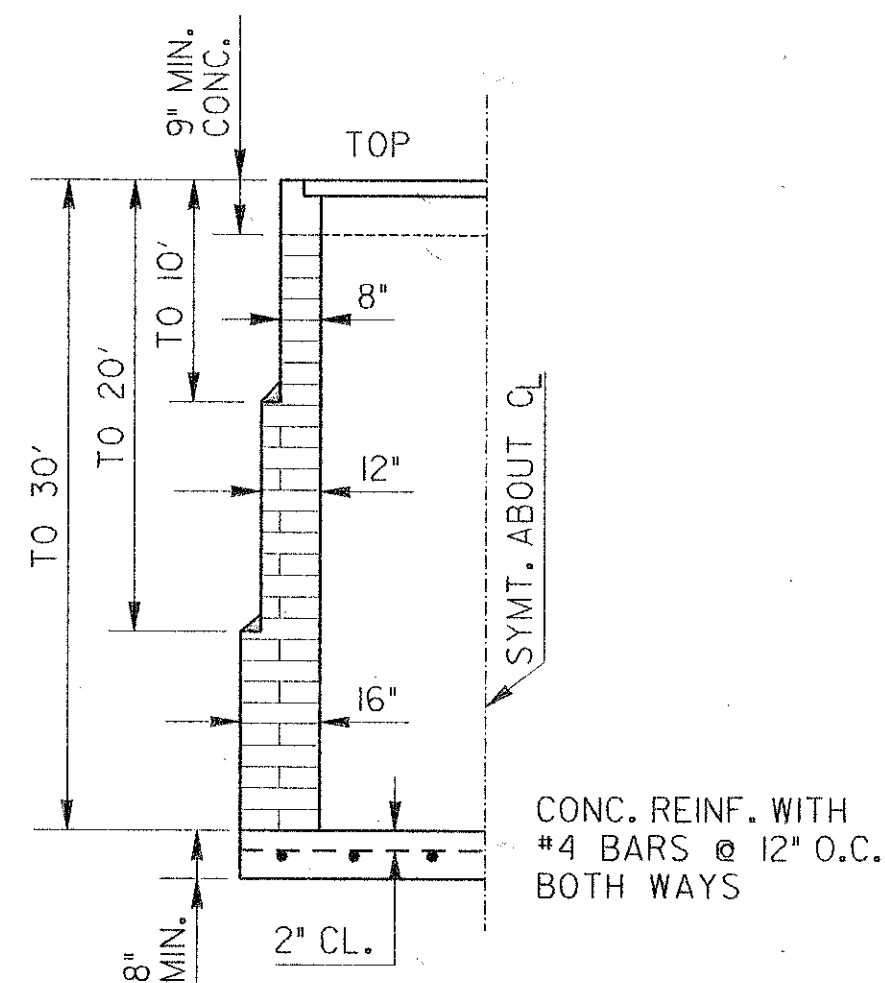
(*) FOR LONGITUDINAL PIPE OVER 18" WITH A 2'-0" DITCH, OR A LONGITUDINAL PIPE OVER 36" WITH A 4'-0" DITCH, AN ENLARGED BASE IS REDUCED TO W_1 = DITCH WIDTH WITH APPLICABLE MIN. H IN COLUMN AT EXTREME RIGHT.

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

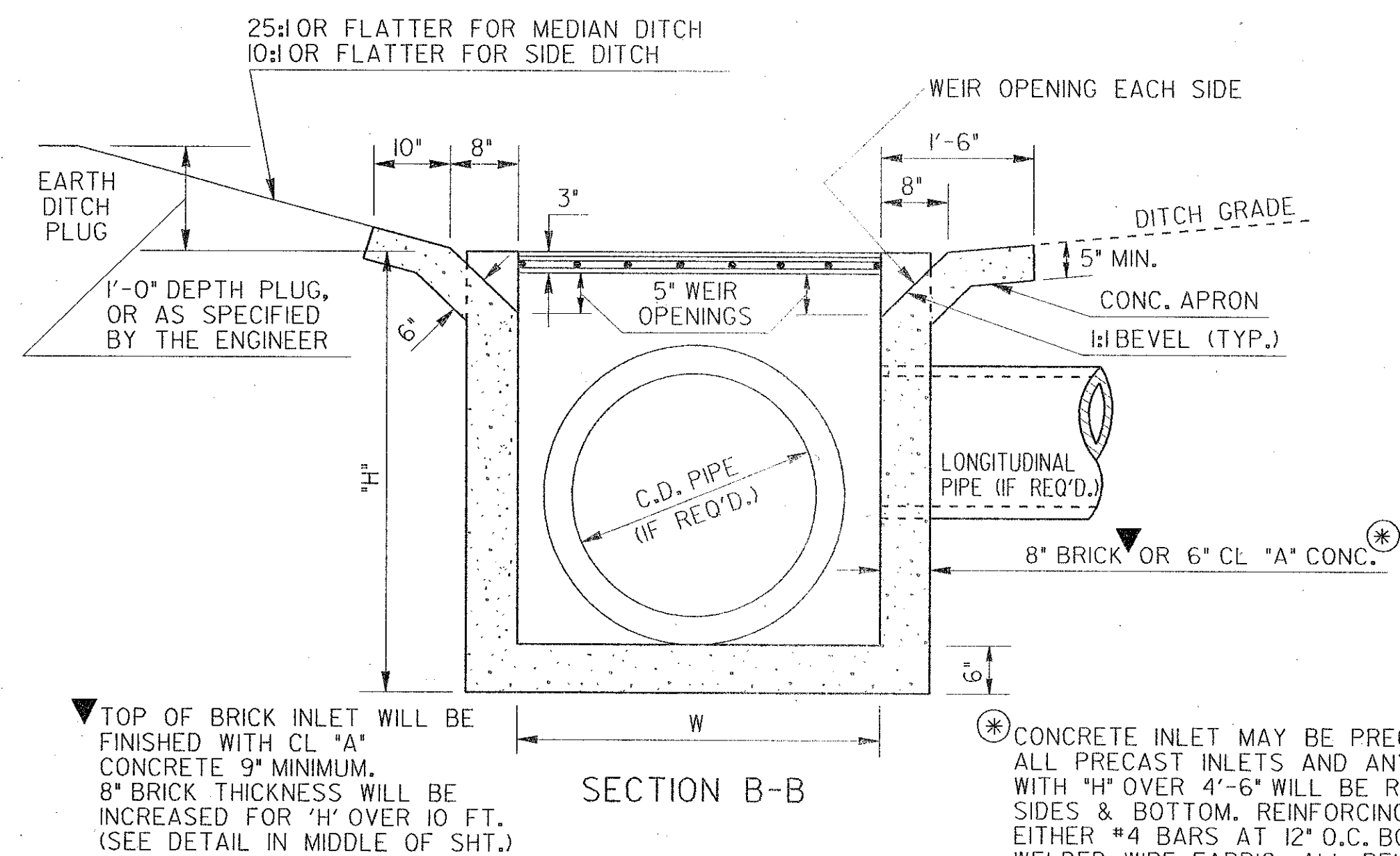
SEE GRATE FABRICATION DETAILS FOR BAR
SIZES, ANGLE IRON SIZE AND WELDING DETAILS.
GRATE WILL BE INCLUDED IN PAYMENT
OF INLET. (NO SEPARATE PAYMENT WILL
BE MADE FOR GRATE.)



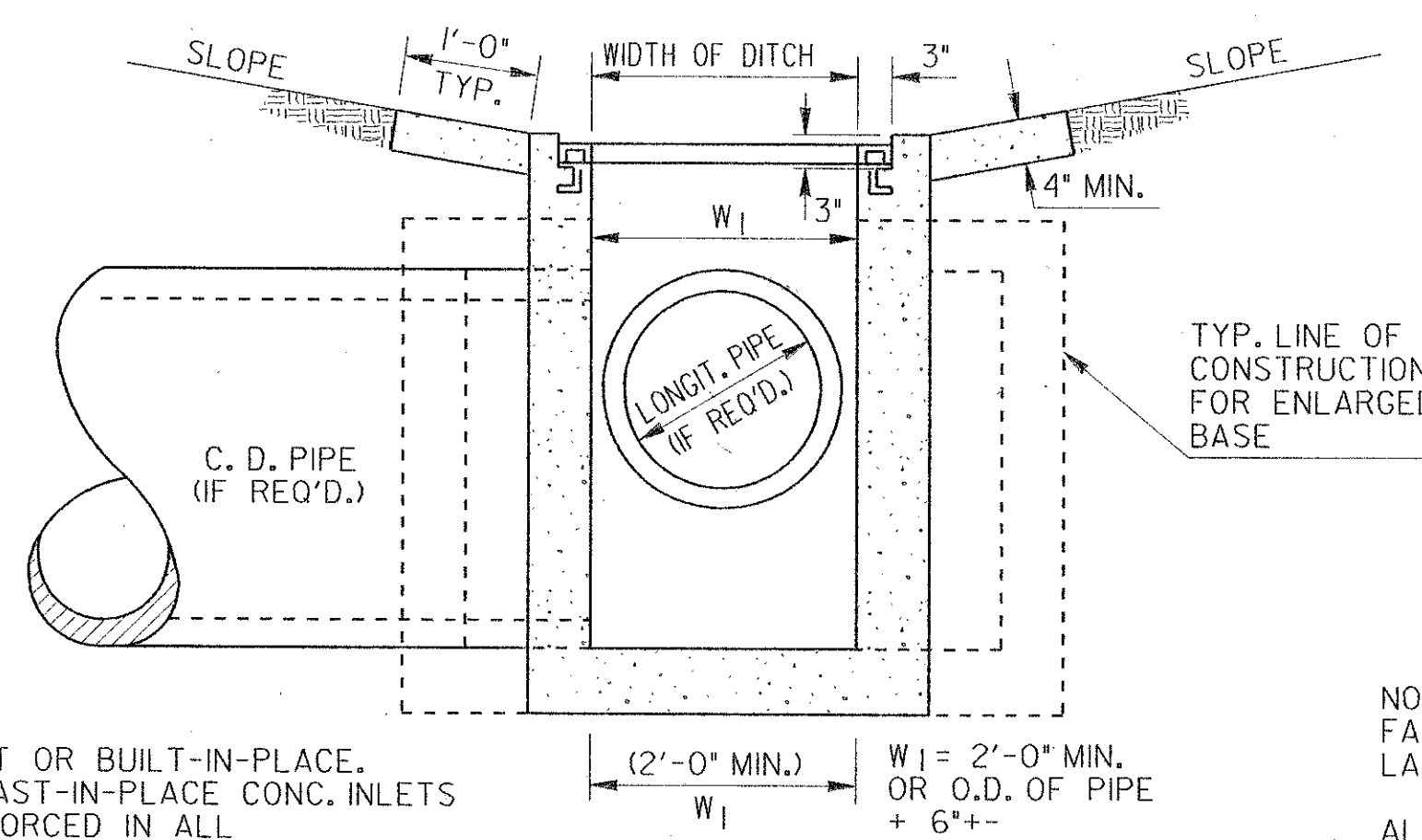
* PARABOLT CONC. ANCHOR BOLTS (P B12-514) OR PHILLIPS RED HEAD (WW-I254), OR AN EQUAL 1/2" DIA. GALVANIZED ANCHOR TYPE BOLT, WHICH HAS BEEN APPROVED BY THE CA. D.O.T. LABORATORY MAY BE USED INSTEAD OF THE BOLT SHOWN. ALL SUCH ALTERNATES ARE TO BE INSTALLED AS RECOMMENDED BY THE MANUFACTURER.



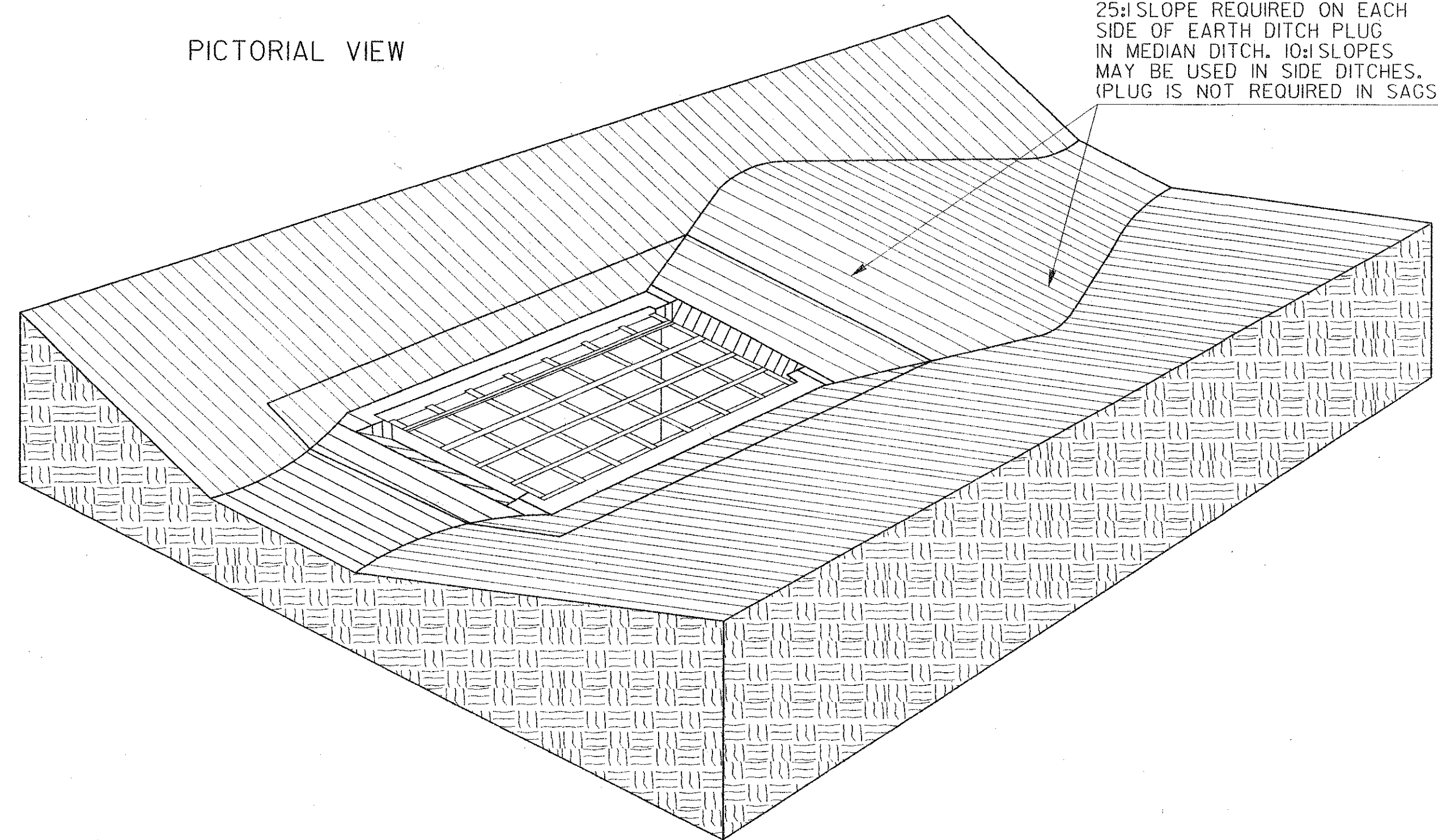
DETAIL OF DEPTH LIMITS FOR BRICK WALL THICKNESS



* CONCRETE INLET MAY BE PRECAST OR BUILT-IN-PLACE. ALL PRECAST INLETS AND ANY CAST-IN-PLACE CONC. INLETS WITH 4" 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.

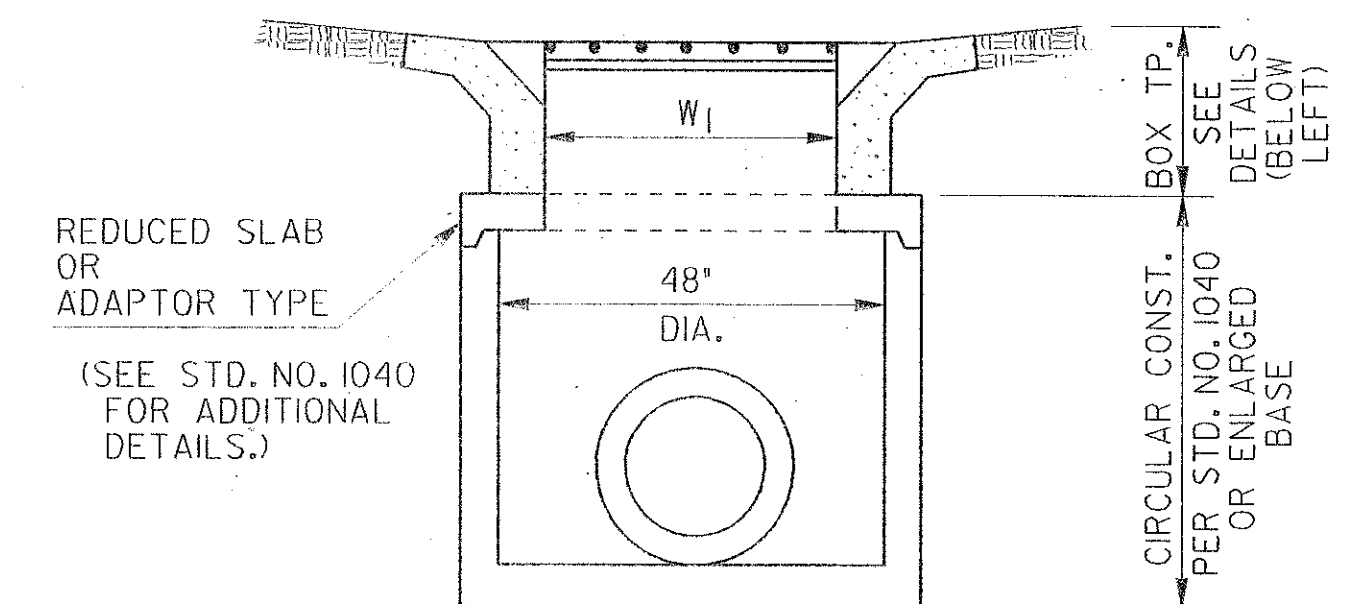


SECTION A-A



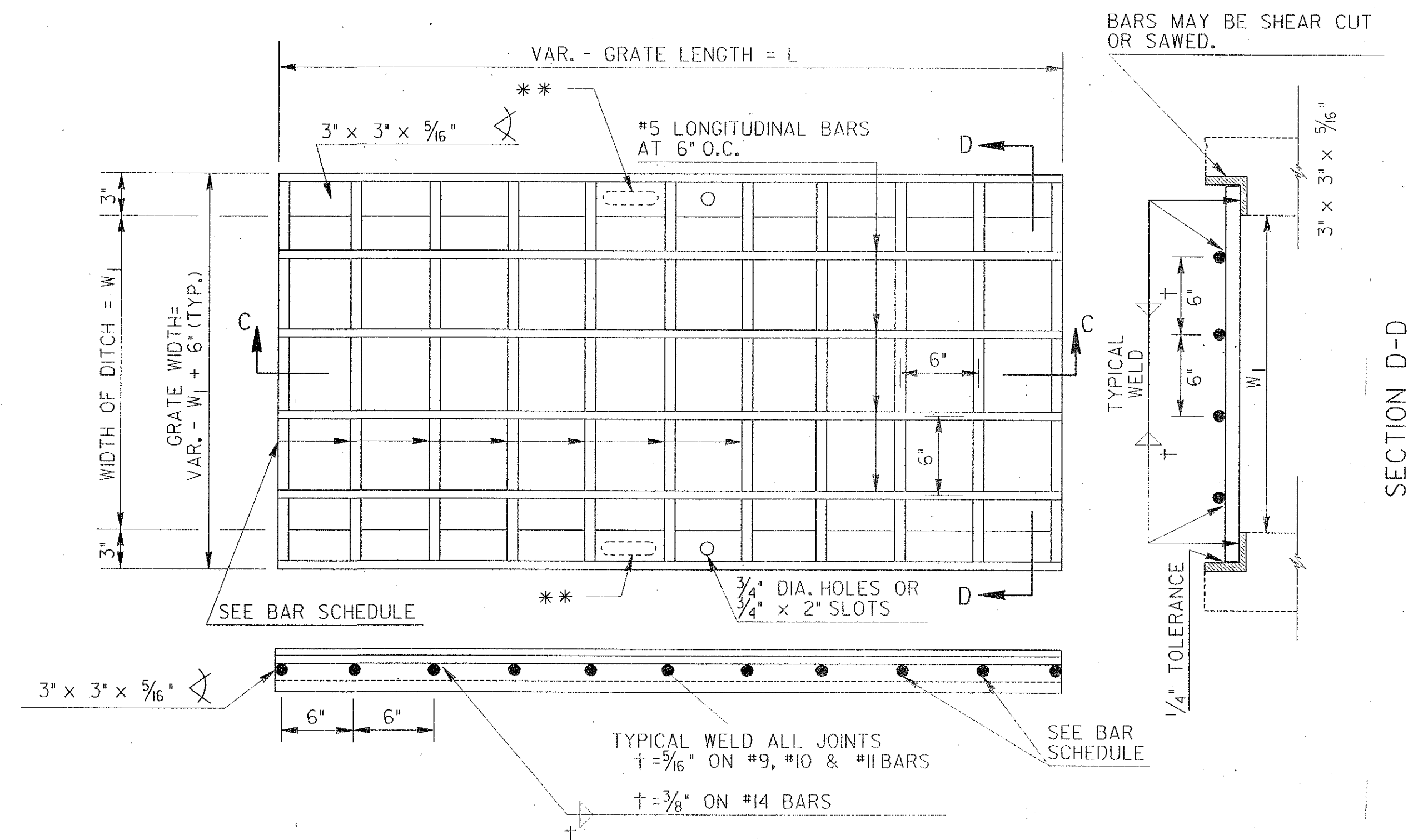
25:1 SLOPE REQUIRED ON EACH
SIDE OF EARTH DITCH PLUG
IN MEDIAN DITCH. 10:1 SLOPES
MAY BE USED IN SIDE DITCHES.
(PLUG IS NOT REQUIRED IN SAGS.)

DROP INLET WITH CIRCULAR BASE			
OULET PIPE	ADAPTOR	W X W ₁	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



SECTION D-D

W ₁	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 $\frac{3}{4}$ " DIAMETER HOLE, A $2" \times \frac{3}{4}"$ OVAL HOLE MAY BE PROVIDED.

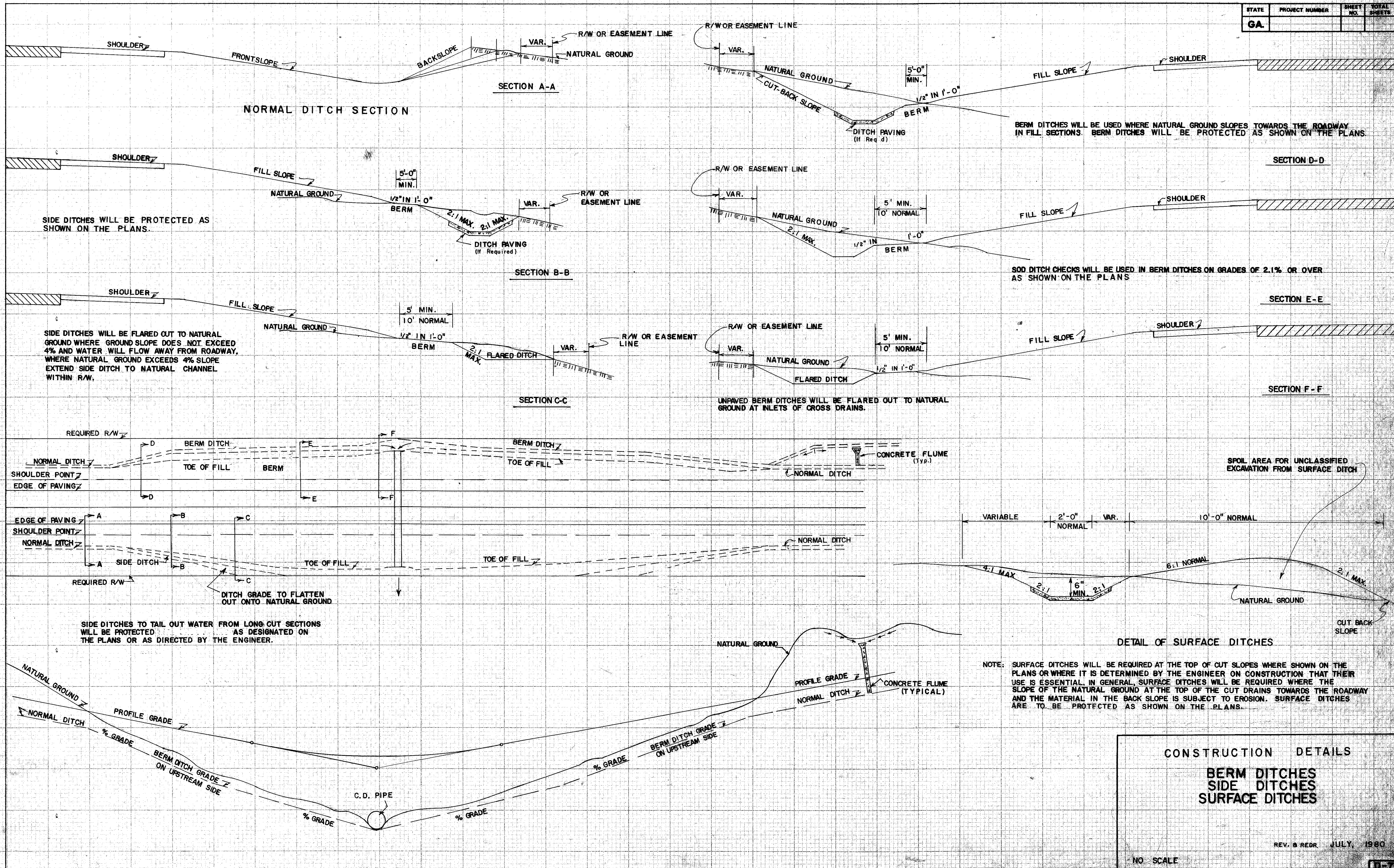
NOTES FOR GRATE:
FABRICATOR WILL ARRANGE FOR TESTING BY THE GA. D.O.T.
LABORATORY 14 DAYS PRIOR TO FABRICATION.

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

ALL LONGITUDINAL BARS WILL BE #5 BARS.

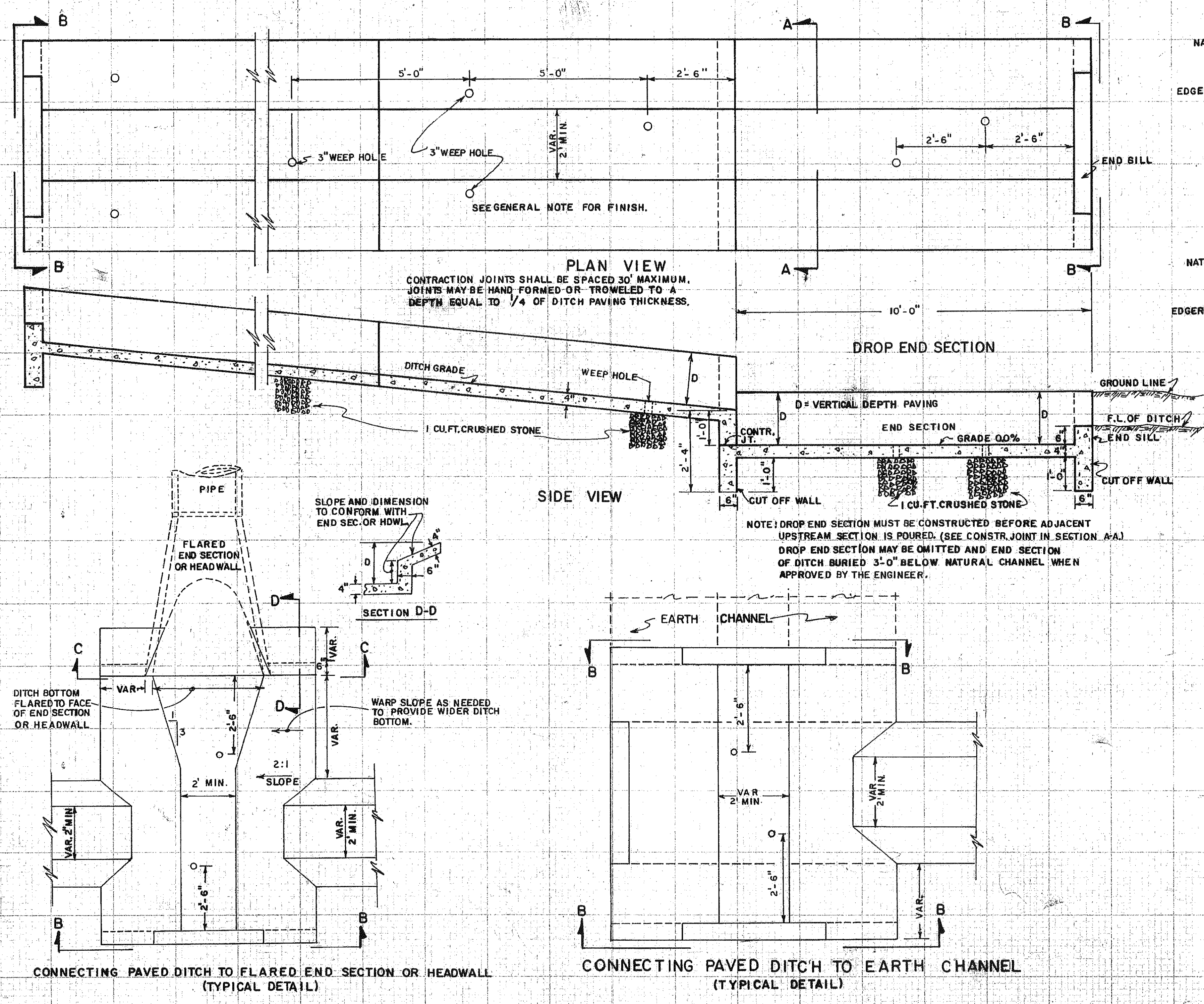
GRATE BAR SPACINGS SHOWN ARE "NOMINAL-MINIMUM" AND MAY BE INCREASED (UP TO 10% TYPICAL) WITH NO ADDITIONAL PAYMENT TO PROVIDE BEST FIT FOR STRUCTURE.

		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



TYPICAL QUANTITIES FOR 4" CONCRETE DITCH PAVING — SQ. YDS./LIN. FT.																															DEPTH																																																																																																																																																																																																																																																										
DEPTH (feet)	8:1 FR.SL. V. BOTTOM 8:1 BK.SL.	8:1 FR.SL. 2' BOTTOM 8:1 BK.SL.	8:1 FR.SL. 2' BOTTOM 4:1 BK.SL.	8:1 FR.SL. 2' BOTTOM 3:1 BK.SL.	8:1 FR.SL. 2' BOTTOM 2:1 BK.SL.	6:1 FR.SL. 2' BOTTOM 6:1 BK.SL.	6:1 FR.SL. 2' BOTTOM 4:1 BK.SL.	6:1 FR.SL. 2' BOTTOM 3:1 BK.SL.	6:1 FR.SL. 2' BOTTOM 2' BOTTOM	4:1 FR.SL. 2' BOTTOM 4:1 BK.SL.	4:1 FR.SL. 2' BOTTOM 2' BOTTOM	2:1 FR.SL. 2' BOTTOM 2:1 BK.SL.	2:1 FR.SL. 2' BOTTOM 2' BOTTOM	2:1 FR.SL. 2' BOTTOM 2' BOTTOM	2:1 FR.SL. 2' BOTTOM 2' BOTTOM	2:1 FR.SL. 2' BOTTOM 2' BOTTOM	2:1 FR.SL. 2' BOTTOM 2' BOTTOM	2:1 FR.SL. 2' BOTTOM 2' BOTTOM	2:1 FR.SL. 2' BOTTOM 2' BOTTOM	2:1 FR.SL. 2' BOTTOM 2' BOTTOM	2:1 FR.SL. 2' BOTTOM 2' BOTTOM	2:1 FR.SL. 2' BOTTOM 2' BOTTOM	2:1 FR.SL. 2' BOTTOM 2' BOTTOM	2:1 FR.SL. 2' BOTTOM 2' BOTTOM	2:1 FR.SL. 2' BOTTOM 2' BOTTOM	2:1 FR.SL. 2' BOTTOM 2' BOTTOM	2:1 FR.SL. 2' BOTTOM 2' BOTTOM	2:1 FR.SL. 2' BOTTOM 2' BOTTOM	2:1 FR.SL. 2' BOTTOM 2' BOTTOM	2:1 FR.SL. 2' BOTTOM 2' BOTTOM	2:1 FR.SL. 2' BOTTOM 2' BOTTOM	2:1 FR.SL. 2' BOTTOM 2' BOTTOM	2:1 FR.SL. 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STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.			



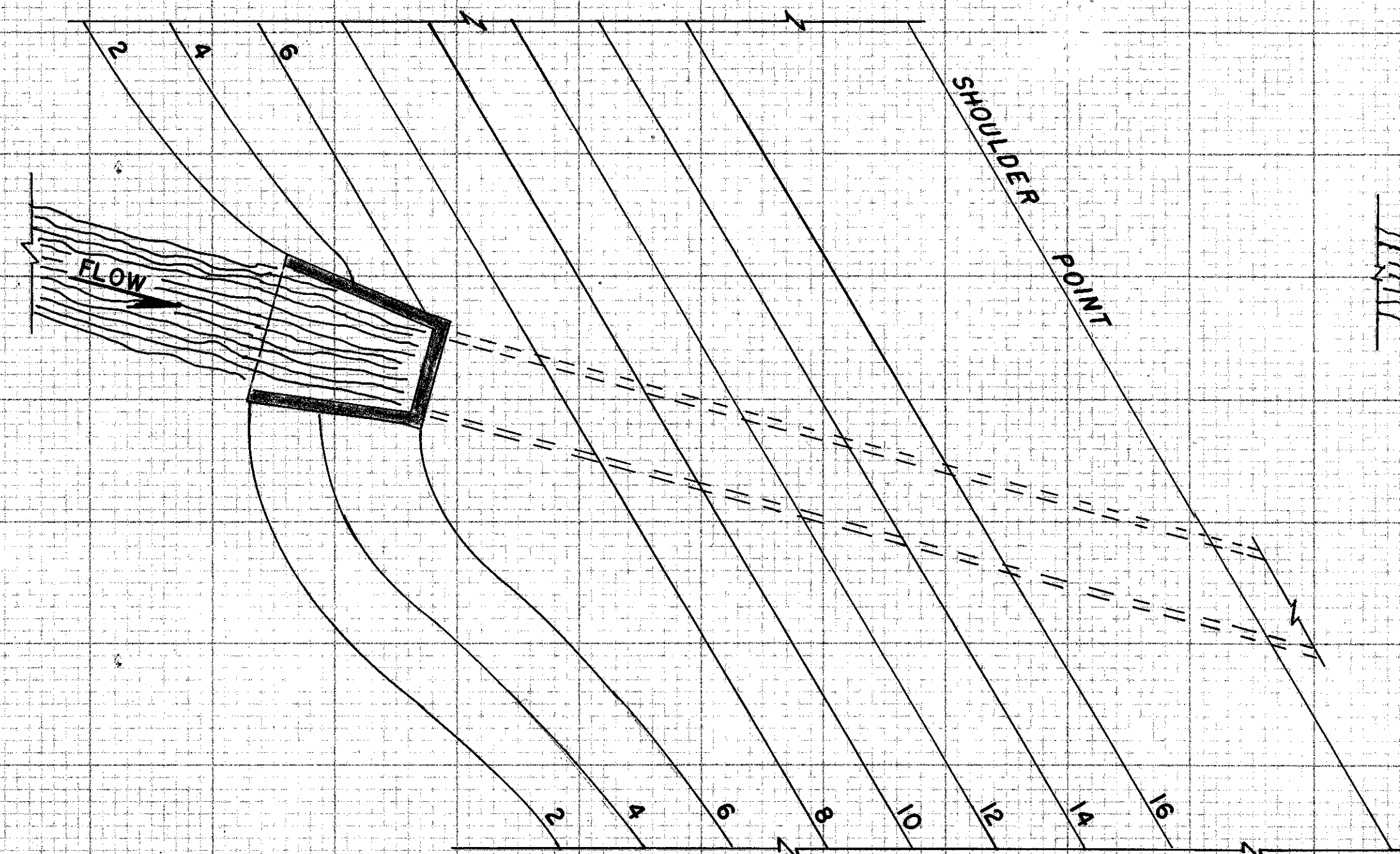
- GENERAL NOTES:**
- SPECIFICATIONS: GEORGIA STANDARD, CURRENT EDITION, & SUPPLEMENTS THERETO.
 - CONCRETE DITCH PAVING IS TO BE CONSTRUCTED TO LINES AND GRADES SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
 - PAYMENT FOR CONCRETE DITCH PAVING INCLUDES THE CUT-OFF WALL & END SILL AT INLET AND OUTLET END OF DITCH, THE CRUSHED STONE FOR WEEP HOLES, AND EXPANSION JOINT MATERIAL.
 - A DROP END SECTION WILL BE CONSTRUCTED AS 4" CONCRETE DITCH PAVING ON THE DOWNSTREAM END OF ALL PAVED DITCHES.
 - SIDE SLOPES ON PAVED BERM AND SURFACE DITCHES SHALL BE 2:1, UNLESS MODIFIED ON CONSTRUCTION TO MEET FIELD CONDITIONS. WHEN PAVING IS PLACED IN A NORMAL ROADWAY DITCH, THE SIDE SLOPES AND BOTTOM WILL CONFORM TO THOSE SHOWN ON THE ROADWAY TYPICAL SECTION.
 - WEEP HOLES SHALL BE OMITTED IN ALL SURFACE DITCHES OF THE TOP OF CUT SLOPES. WEEP HOLES SHALL BE REQUIRED IN BERM DITCHES AND ROADWAY DITCHES WHEN PAVED.
 - SURFACE FINISH SHALL BE FLOATED SUFFICIENTLY TO COVER AGGREGATE WITH MORTAR.
 - EXPANSION JOINTS ARE REQUIRED WHERE PAVED DITCH CONNECTS TO OTHER CONCRETE STRUCTURES.
 - QUANTITIES APPLY TO ANY TYPE OF DITCH REQUIRING PROTECTION. QUANTITIES MAY ALSO BE USED FOR PERMANENT SOIL REINFORCING MAT OR OTHER KINDS OF DITCH PROTECTION ITEMIZED AS SQUARE YARDS.

CONSTRUCTION DETAILS
4" CONCRETE DITCH PAVING
DETAILS & QUANTITIES

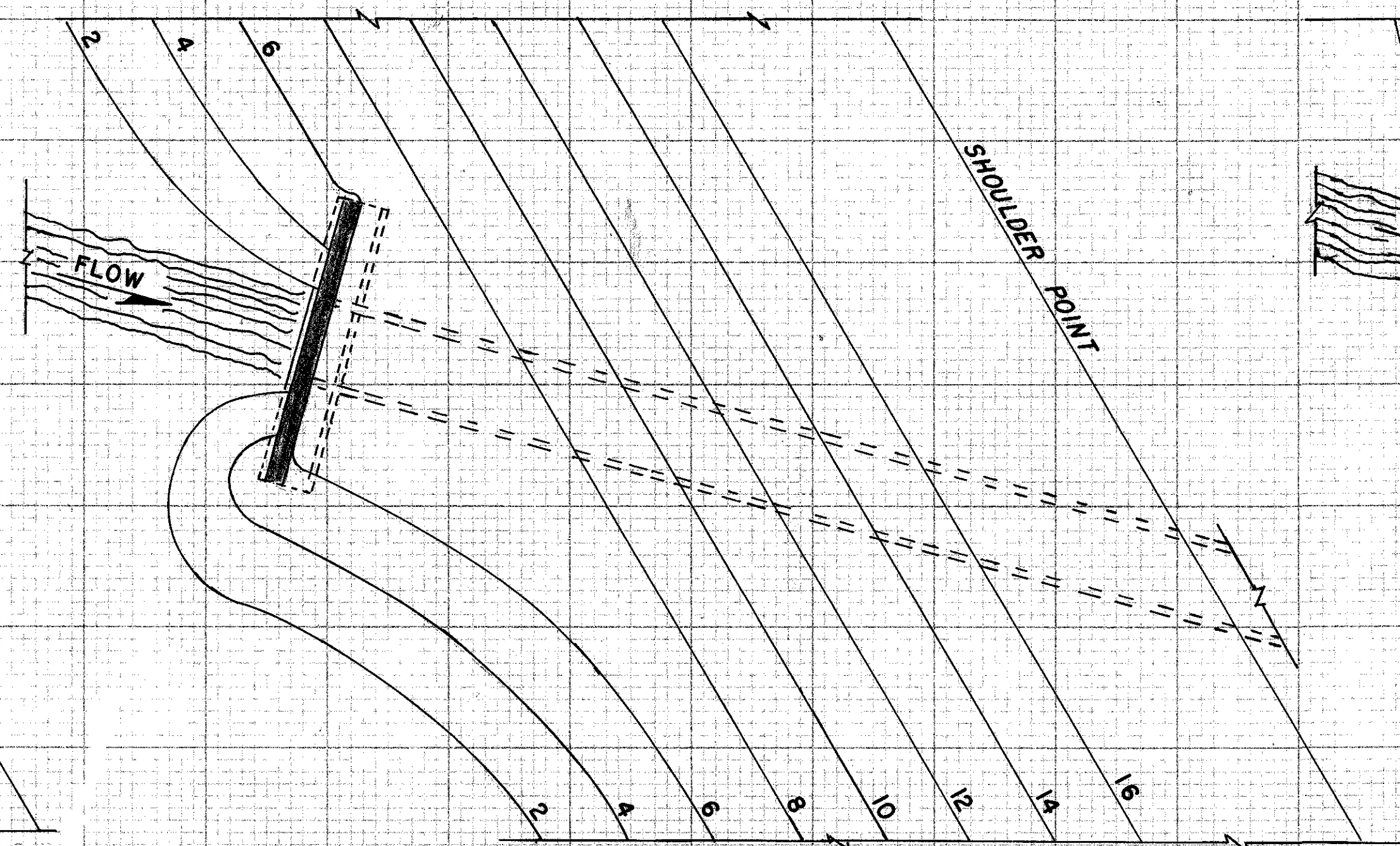
NO SCALE

JAN 1988

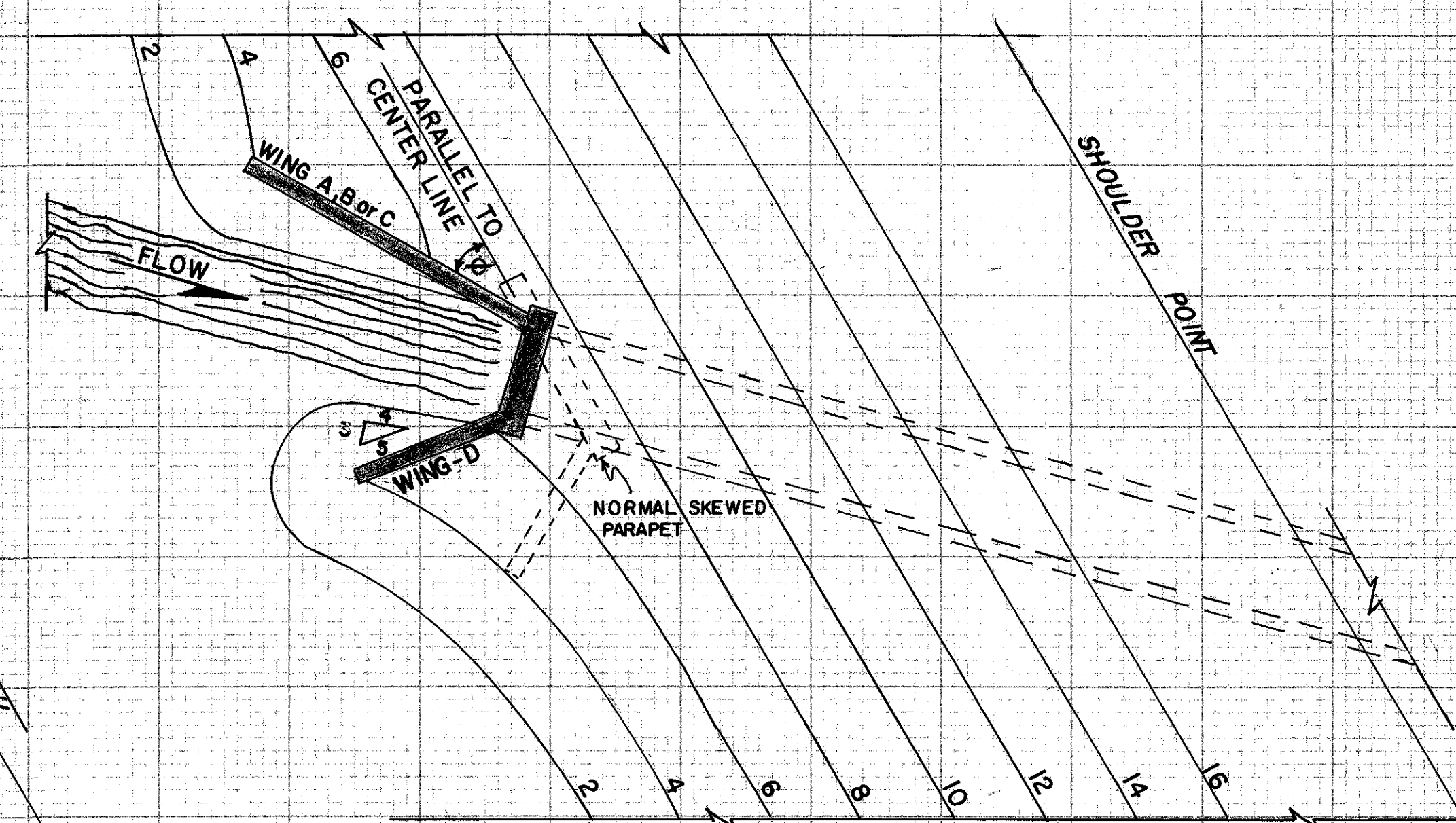
LOCATION OF STANDARD 1125 HEADWALL FOR SKEWED PIPES



LOCATION OF STRAIGHT HEADWALL FOR SKEWED PIPES

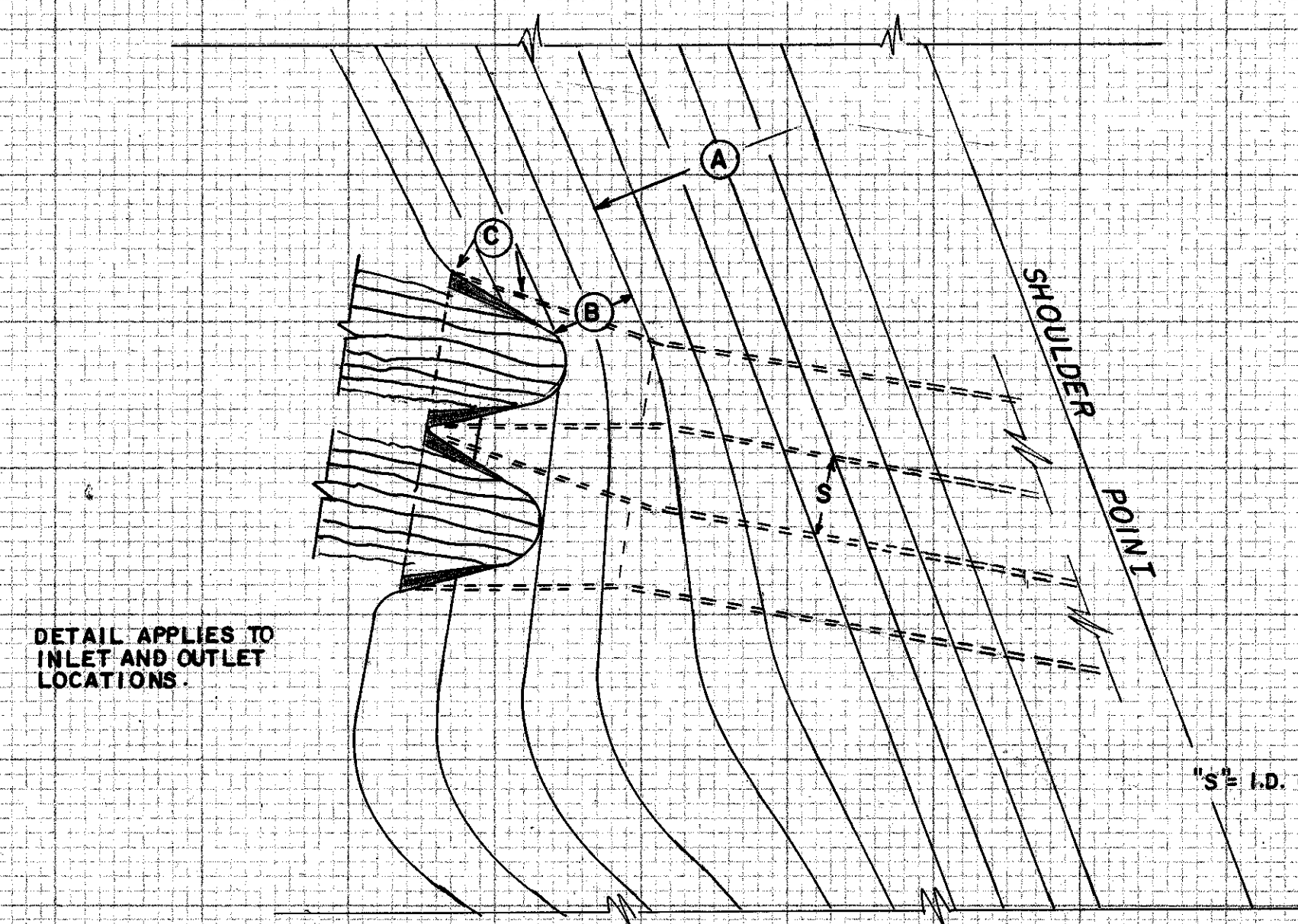


LOCATION OF WINGWALLS & PARAPET FOR SKEWED BOX CULVERTS



BOX CULVERT WING WALLS		
75° SKEW	WING-A	$\phi = 45^\circ$
60° SKEW	WING-B	$\phi = 45^\circ$
45° SKEW	WING-C	$\phi = 30^\circ$
ALL SKEWS	WING-D	$\frac{5}{3} \frac{1}{4}$

LOCATION OF FLARED END SECTIONS FOR MULTIPLE LINE SKEWED PIPES



NOTE: FOR METAL FLARED END SECTION

ON MULTIPLE PIPE LINES WHERE WINGTIPS OF ADJACENT METAL END SECTIONS OVERLAP, THE OVERLAPPING PORTIONS MAY BE FIELD CUT TO FIT AND THE ADJACENT END SECTIONS WELDED TOGETHER ALONG THE LINE OF CUT WITH ALL DAMAGE TO THE GALVANIZING BEING REPAIRED TO THE EQUAL OF ORIGINAL CONDITION, OR THE DIMENSION "S" (AT THE DIRECTION OF THE ENGINEER OR AS SHOWN ON THE PLANS) MAY BE ADJUSTED IN ORDER TO ACCOMMODATE THE END SECTIONS.

"S" = I.D. OF PIPE OR 3 FT. WHICHEVER IS SMALLER. SEE STD. 1030-D.

DETAIL APPLIES TO INLET AND OUTLET LOCATIONS.

- (A) = NORMAL FILL SLOPES
- (B) = SLOPE 4:1 OR FLATTER TO BACK OF END SECTION (FOR CONC. END SECTION)
- (C) = SLOPE WARPED TO MATCH END SECTION

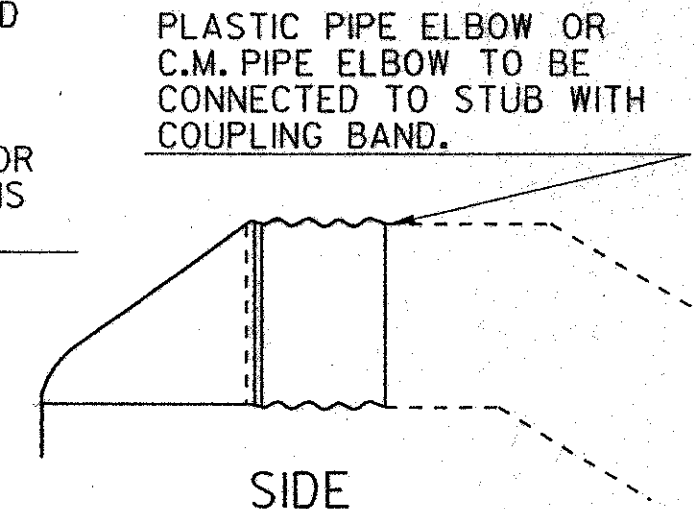
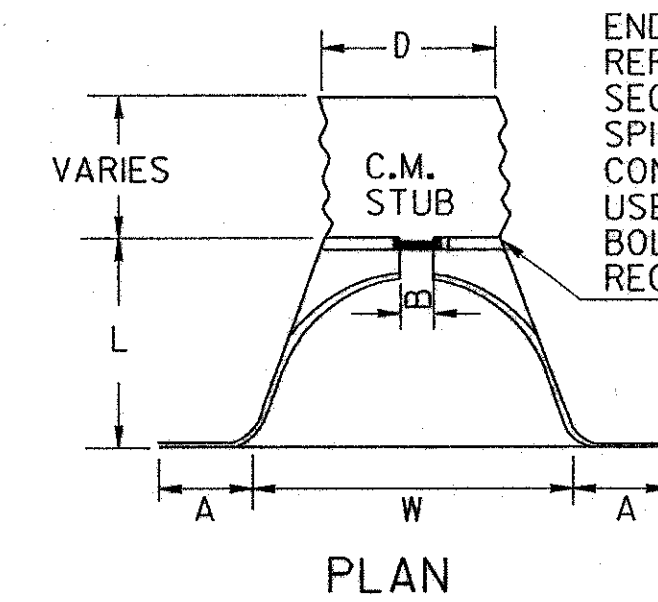
CONSTRUCTION DETAILS
TYPICAL SKEWED CULVERT ENDS

NO SCALE

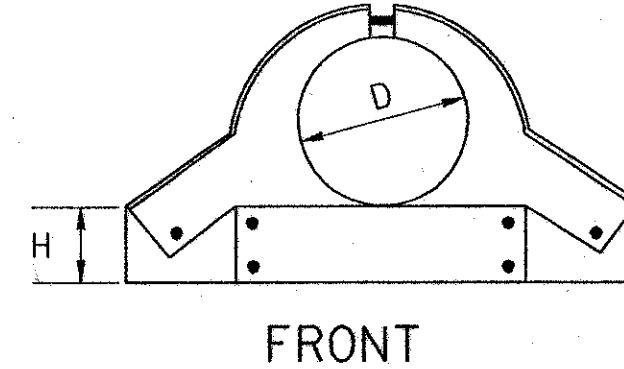
REV. & REDR. DEC., 1983

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.			

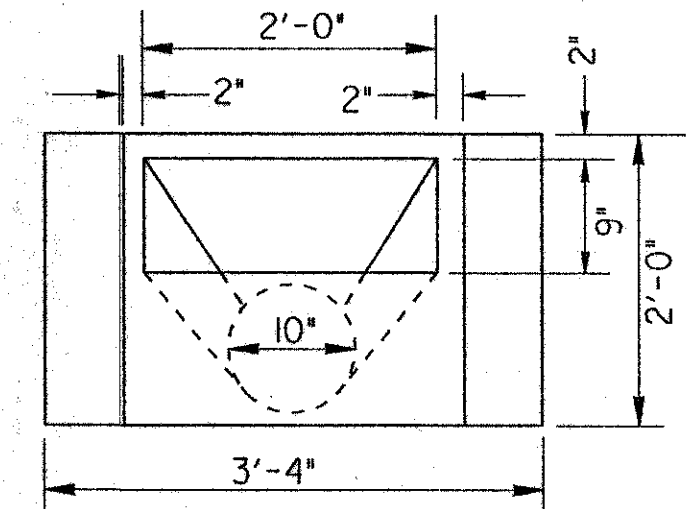
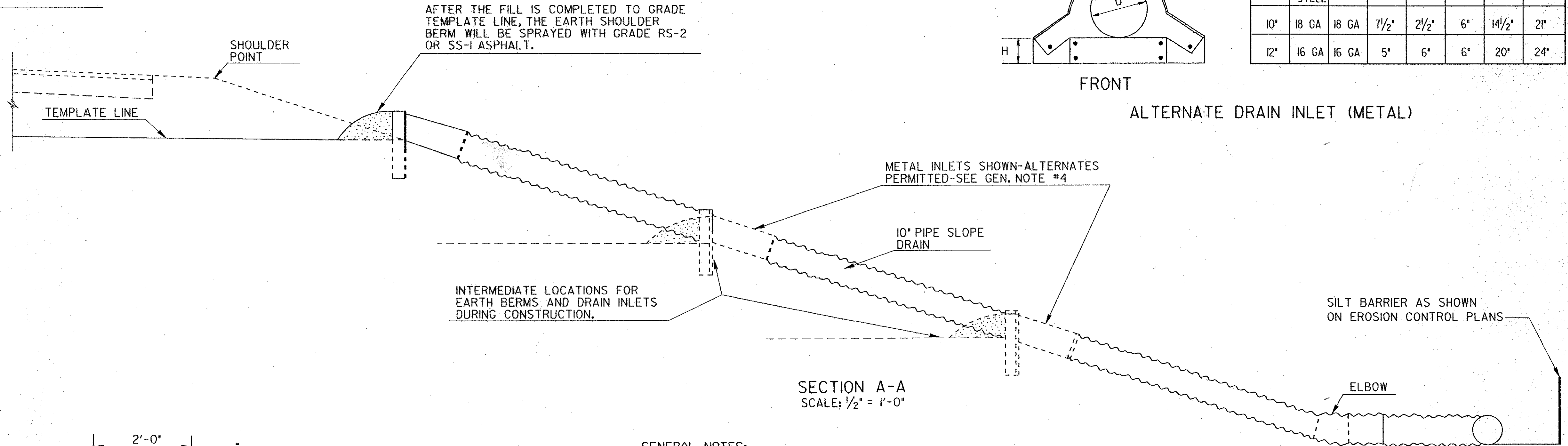
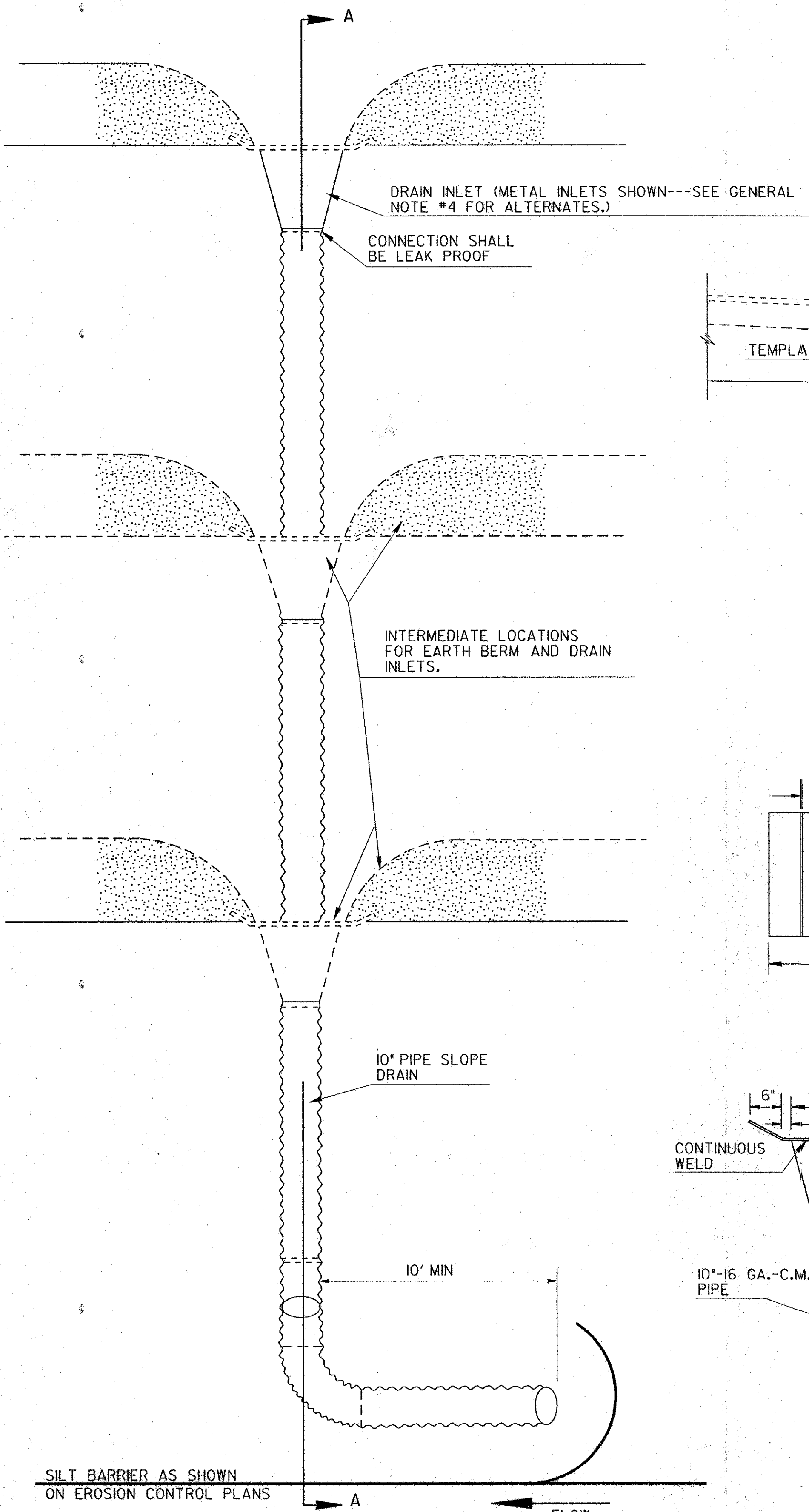
USES:
TEMPORARY PIPE SLOPE DRAIN IS USED TO CARRY WATER FROM THE WORK AREA TO A LOWER ELEVATION. TYPICAL SPACING SHALL BE AT INTERVALS OF 500 FEET ON DIAMETER TO 2% GRADES, 200 FEET ON STEEPER GRADES, AND MORE FREQUENTLY AS DICTATED BY EXISTING FIELD CONDITIONS.



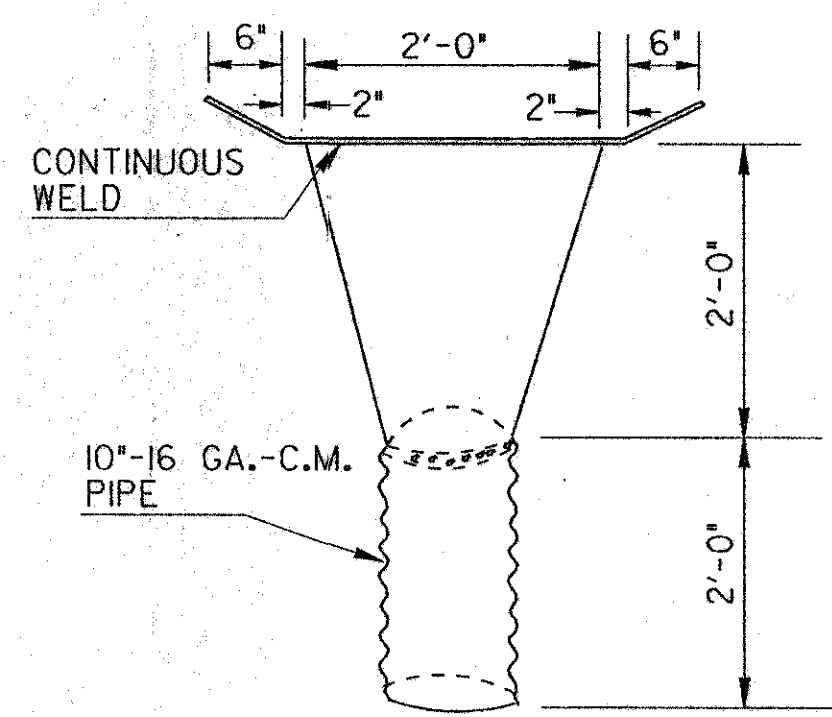
TYPICAL DIMENSIONS							
D	GALV. STEEL	ALUM.	A	B	H	L	W
10"	18 GA	18 GA	7 1/2"	2 1/2"	6"	14 1/2"	21"
12"	16 GA	16 GA	5"	6"	6"	20"	24"



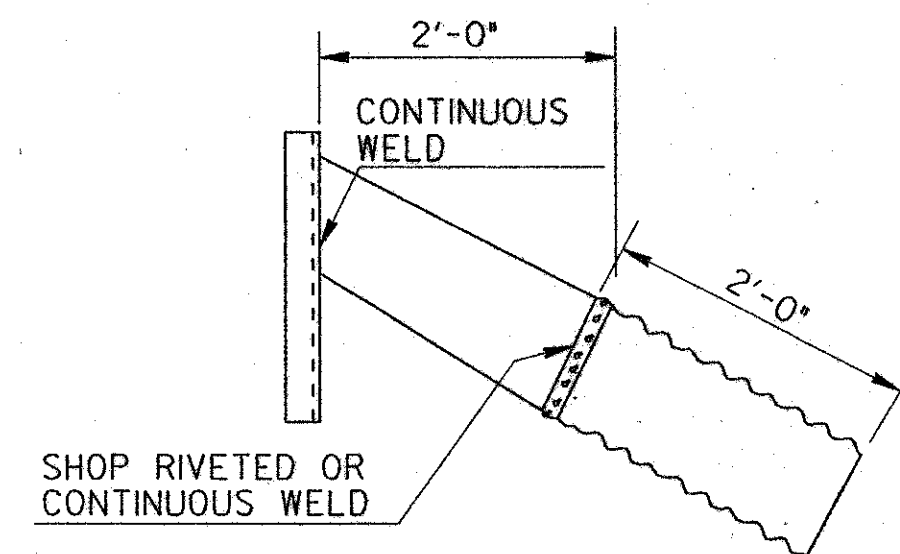
ALTERNATE DRAIN INLET (METAL)



FRONT VIEW
SCALE: 3/4\"/>



PLAN VIEW
SCALE: 3/4\"/>



SIDE VIEW
SCALE: 3/4\"/>

GENERAL NOTES:

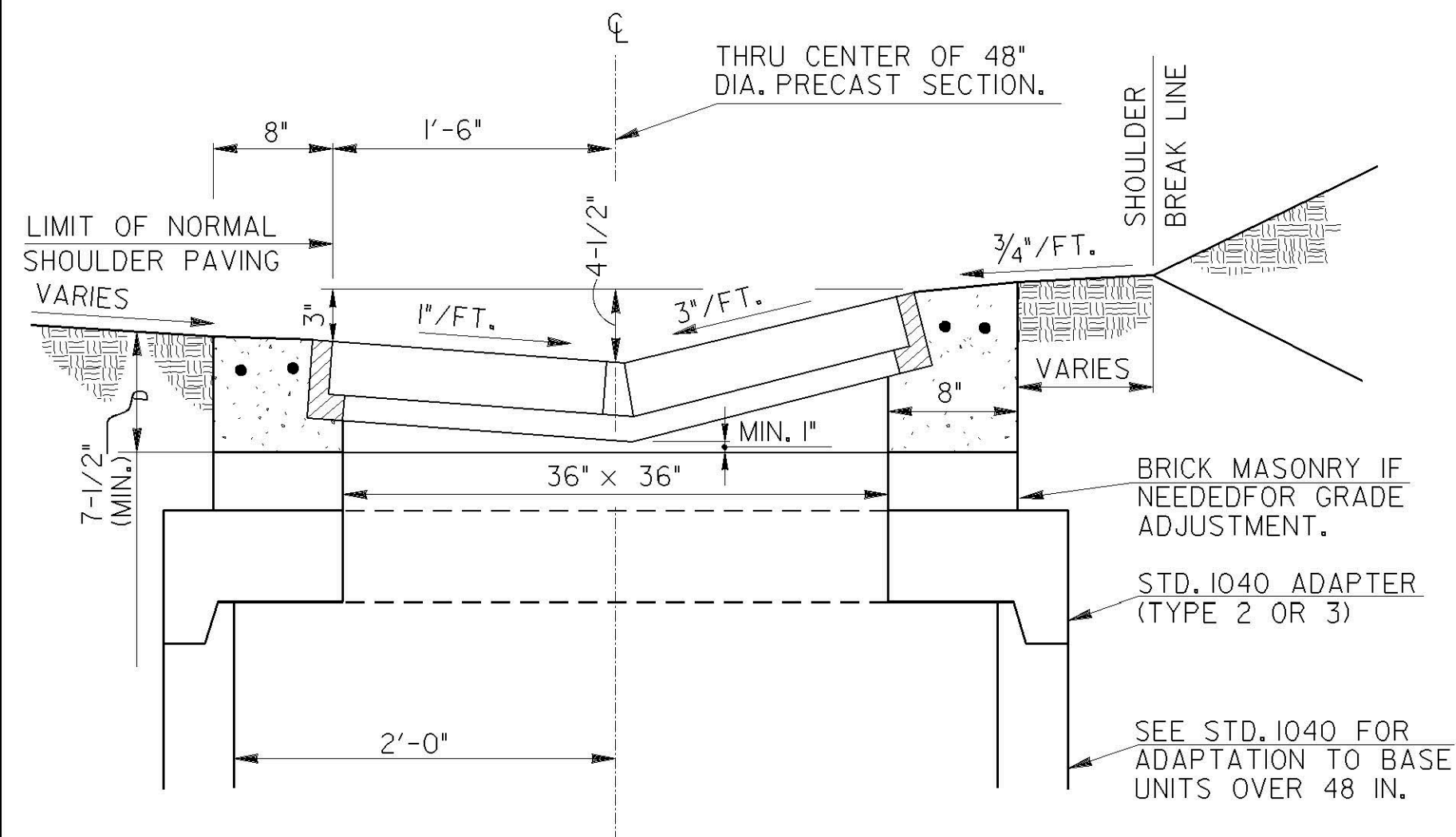
1. DRAIN INLETS AND SLOPE DRAIN PIPE USED FOR TEMPORARY EROSION AND POLLUTION CONTROL UNDER SECTION 163 WILL BE RETAINED FOR USE AS INVENTORY ITEMS BY THE CONTRACTOR.
2. EROSION PROTECTION AT PIPE OUTLET WILL BE PROVIDED AS APPROPRIATE. THE PIPE MAY BE EXTENDED TO OUTLET IN A PAVED DITCH OR TEMPORARY DISSIPATORS CONSTRUCTED OF LOGS OR STONE MAY BE USED. NO SEPARATE PAYMENT WILL BE MADE FOR THIS PROTECTION MEASURE.
3. SLOPE DRAIN PIPE MAY BE ANY TYPE ALLOWED BY THE GA. STANDARD SPECIFICATIONS.
4. ALLOWABLE DRAIN INLET ALTERNATES WILL BE:
(A) IF SLOPE DRAIN IS PLASTIC, A PLASTIC DRAIN INLET OR PLASTIC FLARED END SECTION HAVING SIMILAR DESIGN TO METAL INLETS OR END SECTIONS MAY BE USED FOR THE DRAIN INLET.
(B) A METAL FLARED END SECTION MAY BE USED WITH EITHER PLASTIC PIPE OR C.M. PIPE. IF THE END SECTION WAS MADE FOR LARGER PIPE THAN THE SLOPE DRAIN PIPE, AN APPROVED MODIFIED CONNECTION WILL BE REQUIRED BETWEEN THE PIPE AND THE END SECTION.
(C) A SUMP HOLE WITH DIMENSIONS AT LEAST EQUIVALENT TO THE METAL DRAIN AND LINED WITH POLYETHYLENE OR OTHER MATERIAL AS APPROVED BY THE ENGINEER MAY BE USED WITH ANY TYPE OF PIPE.
(D) THE METAL DRAIN INLET SHOWN MAY BE USED WITH EITHER 10\"/>
5. THE CONTRACTOR MAY ELECT TO USE PIPE LARGER THAN 10\"/>

DATE	REVISION	BY
2-25-00	ADDED ELBOW	

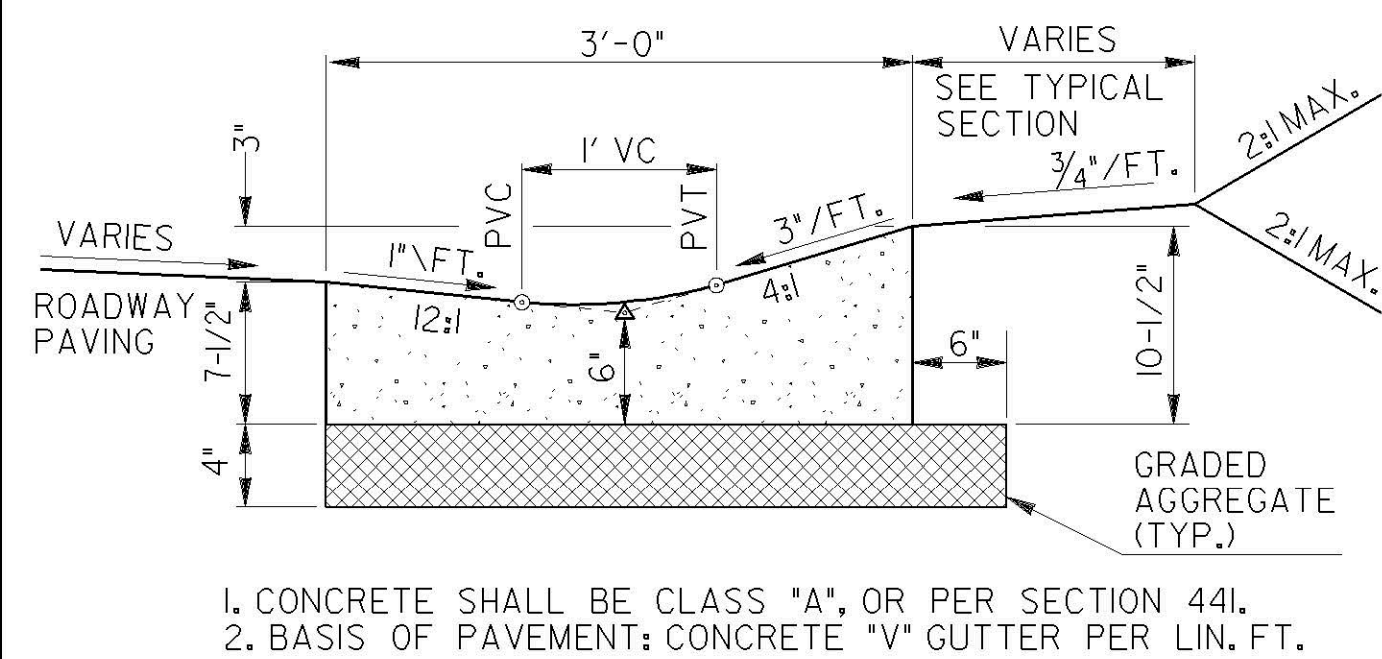
CONSTRUCTION DETAILS
TEMPORARY PIPE SLOPE DRAIN
WITH DRAIN INLET

SCALE AS SHOWN

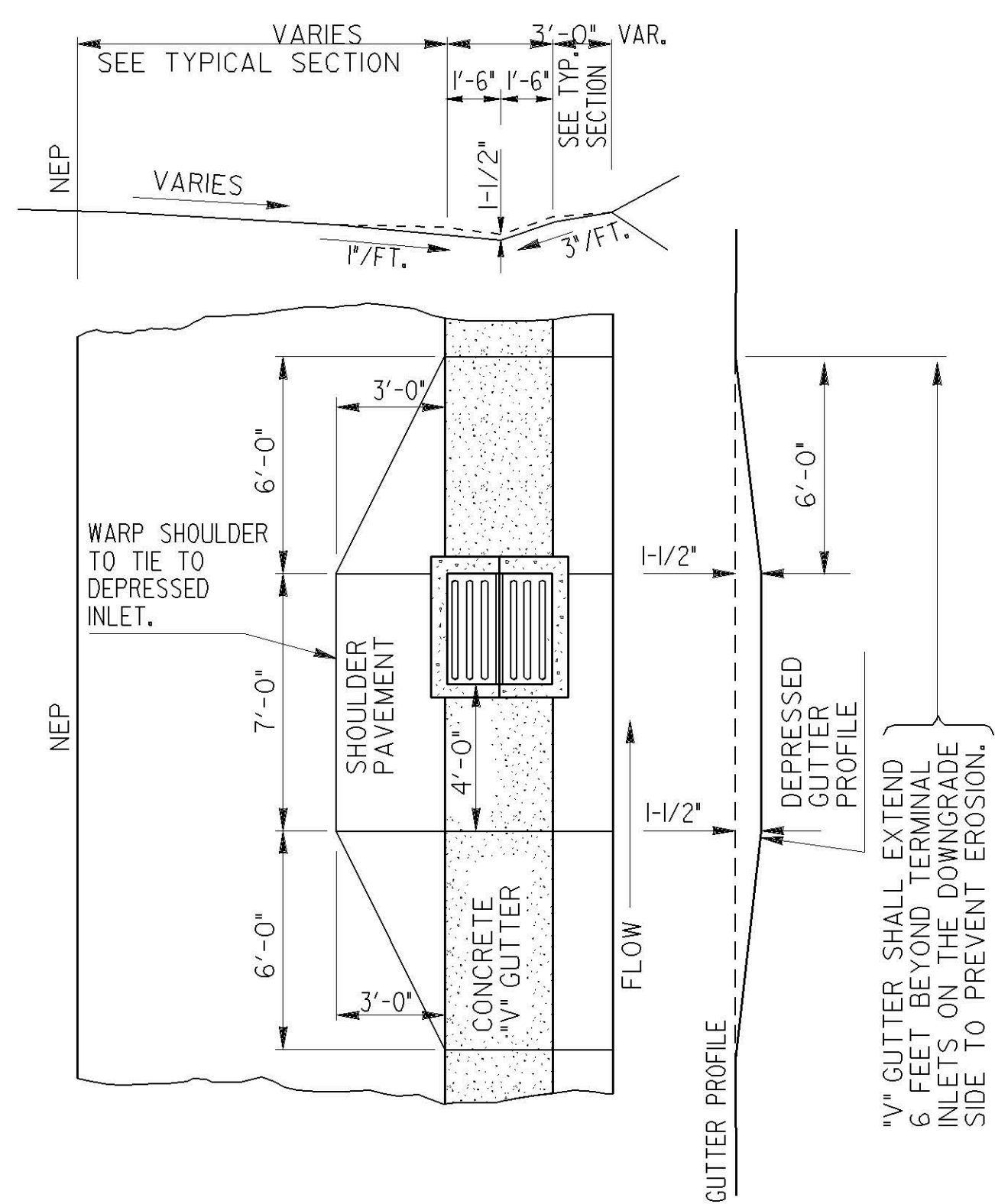
CIRCULAR PRECAST ALTERNATE



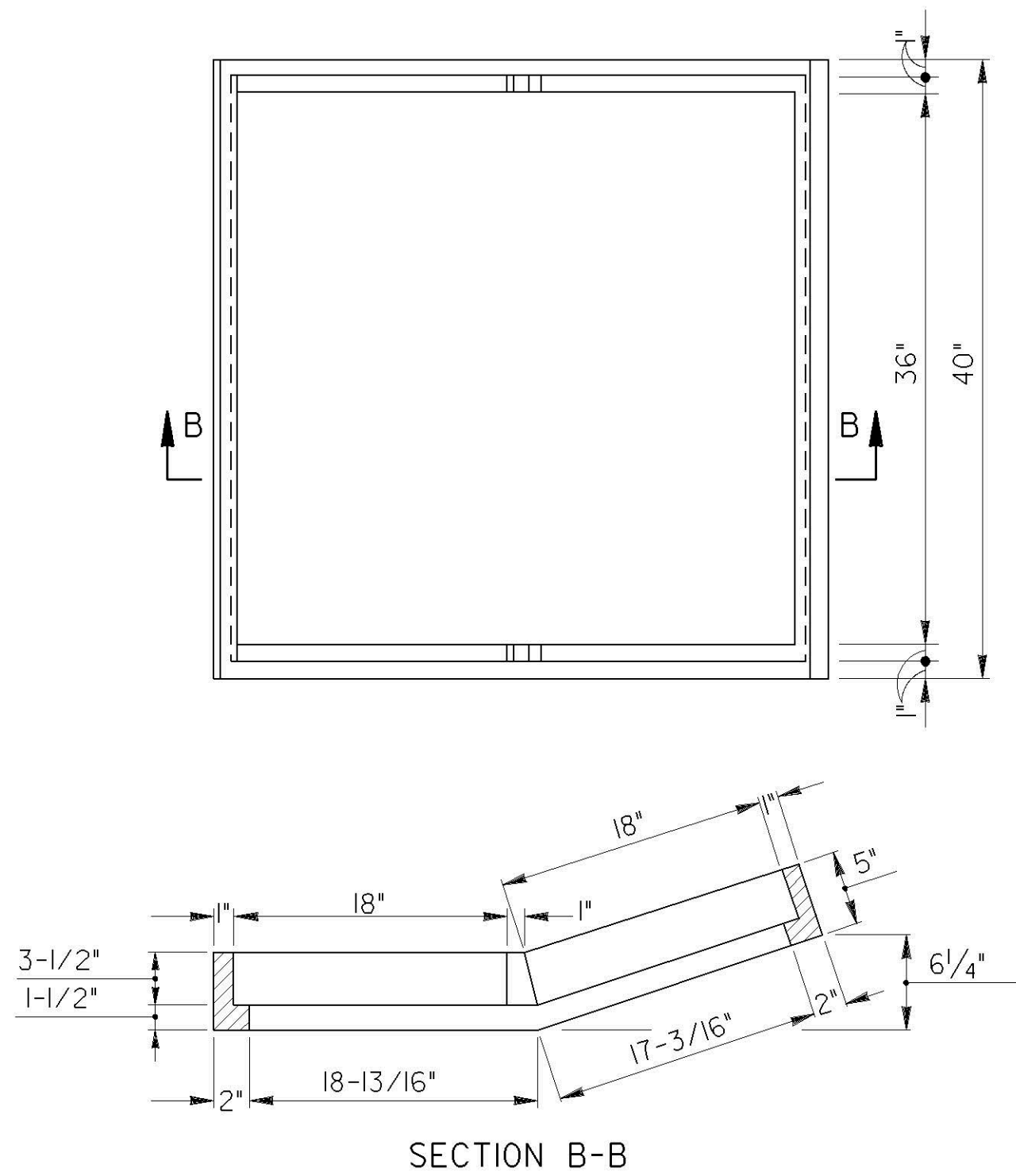
SPECIAL DESIGN
"V" GUTTER DESIGN



DEPRESSED INLET



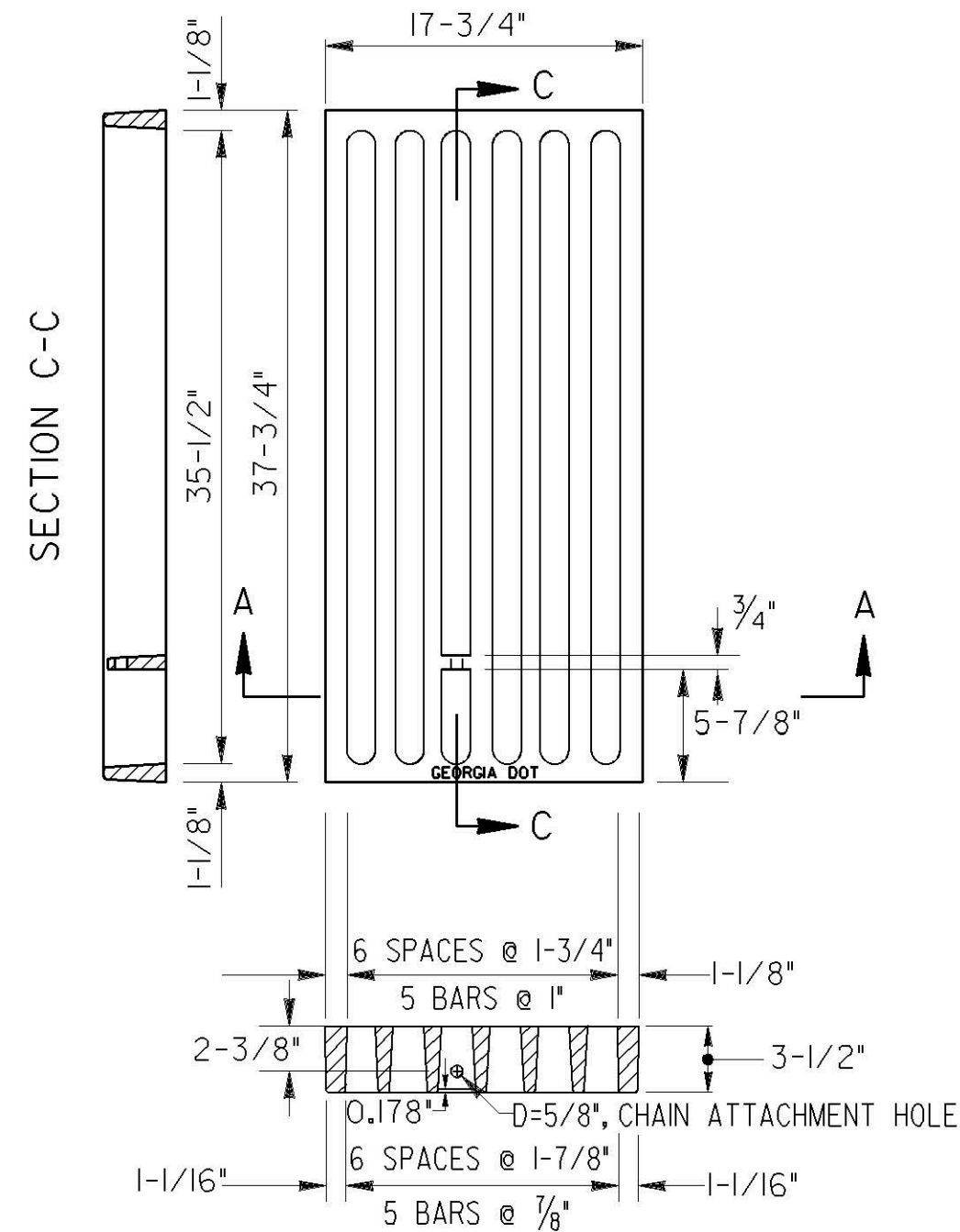
FRAME



NOTE:
FRAME AND GRATE SHALL BE GRAY IRON
DRAINAGE CASTINGS. SEE GEORGIA D.O.T.
STANDARD SPECIFICATIONS 854.

GRATE

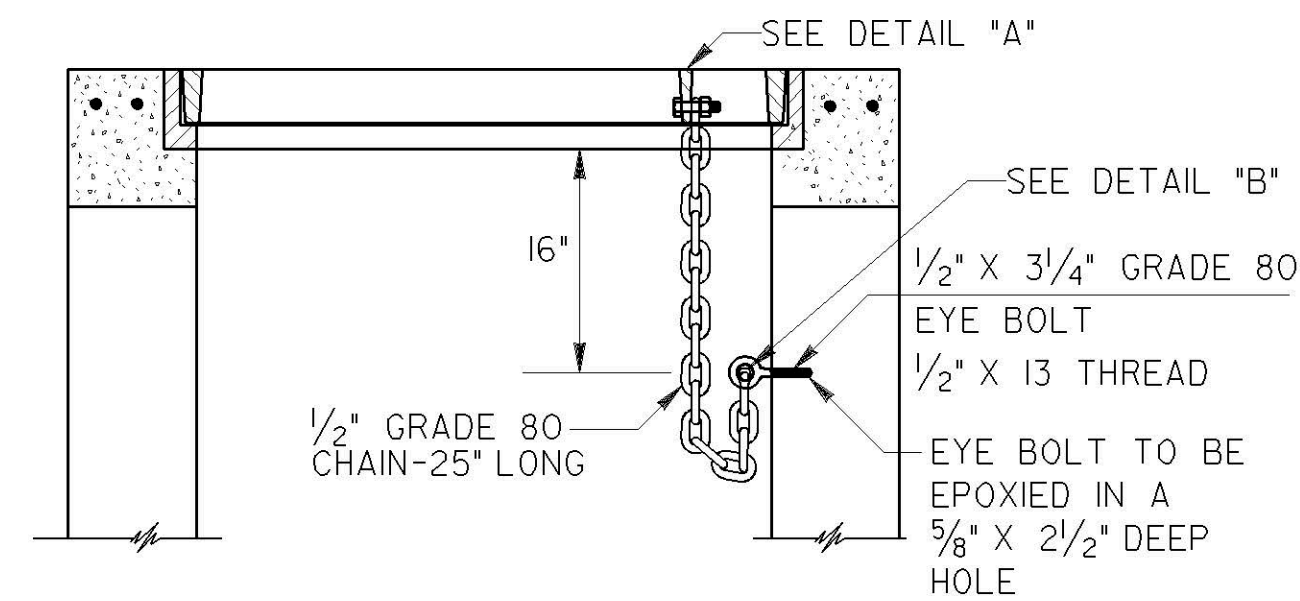
GRATE - 2 EACH REQUIRED



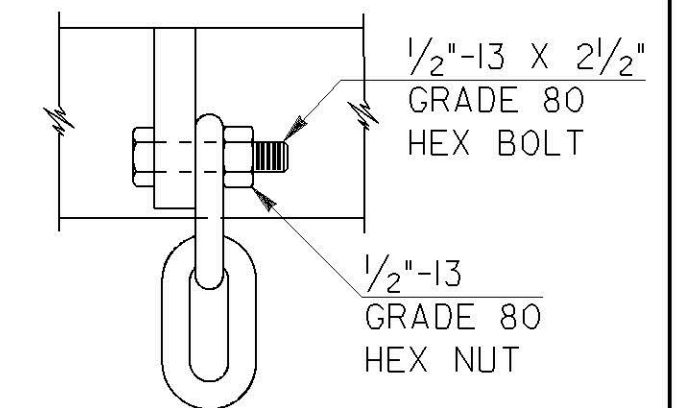
NOTE:
GRATE SHOWN ABOVE SHALL NOT BE USED
WHERE BICYCLES ARE PERMITTED. SEE
CONSTRUCTION DETAIL D-33B FOR BICYCLE GRATE.

SECURITY CHAIN

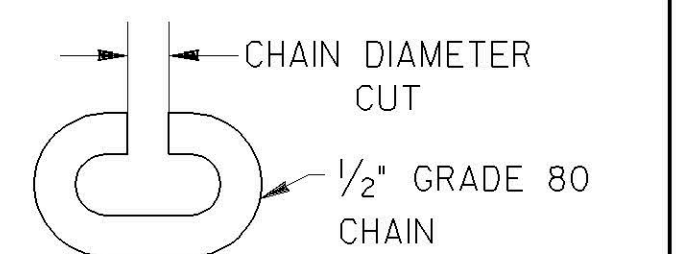
INSTALL SECURITY CHAIN ON BOTH GRATES
(SEE NOTE 8)



CHAIN CONNECTION DETAILS



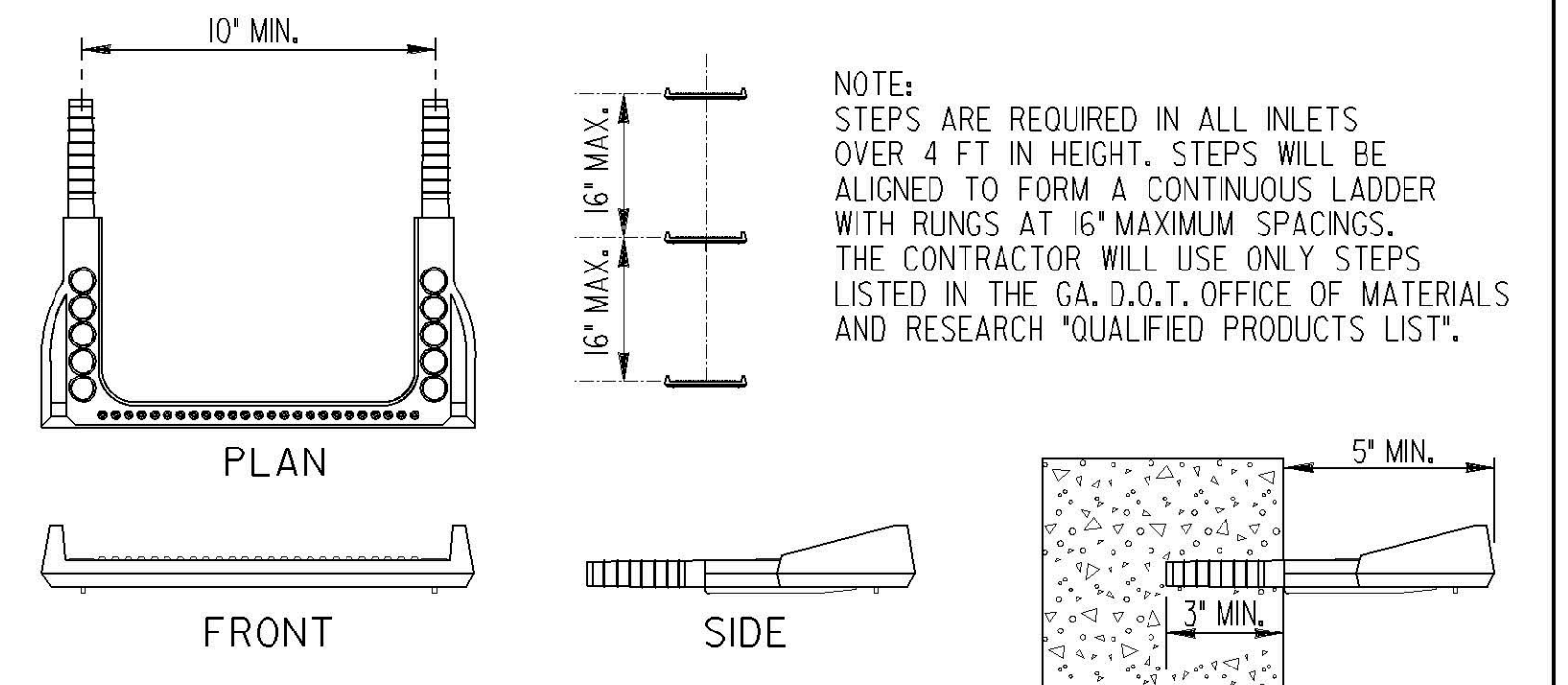
DETAIL "A"
BOLTED CONNECTION DETAIL



CUT CHAIN AND CONNECT CHAIN TO EYE
BOLT AND THEN FIELD WELD TO FILL GAP.

DETAIL "B"
CUT CHAIN LINK DETAIL

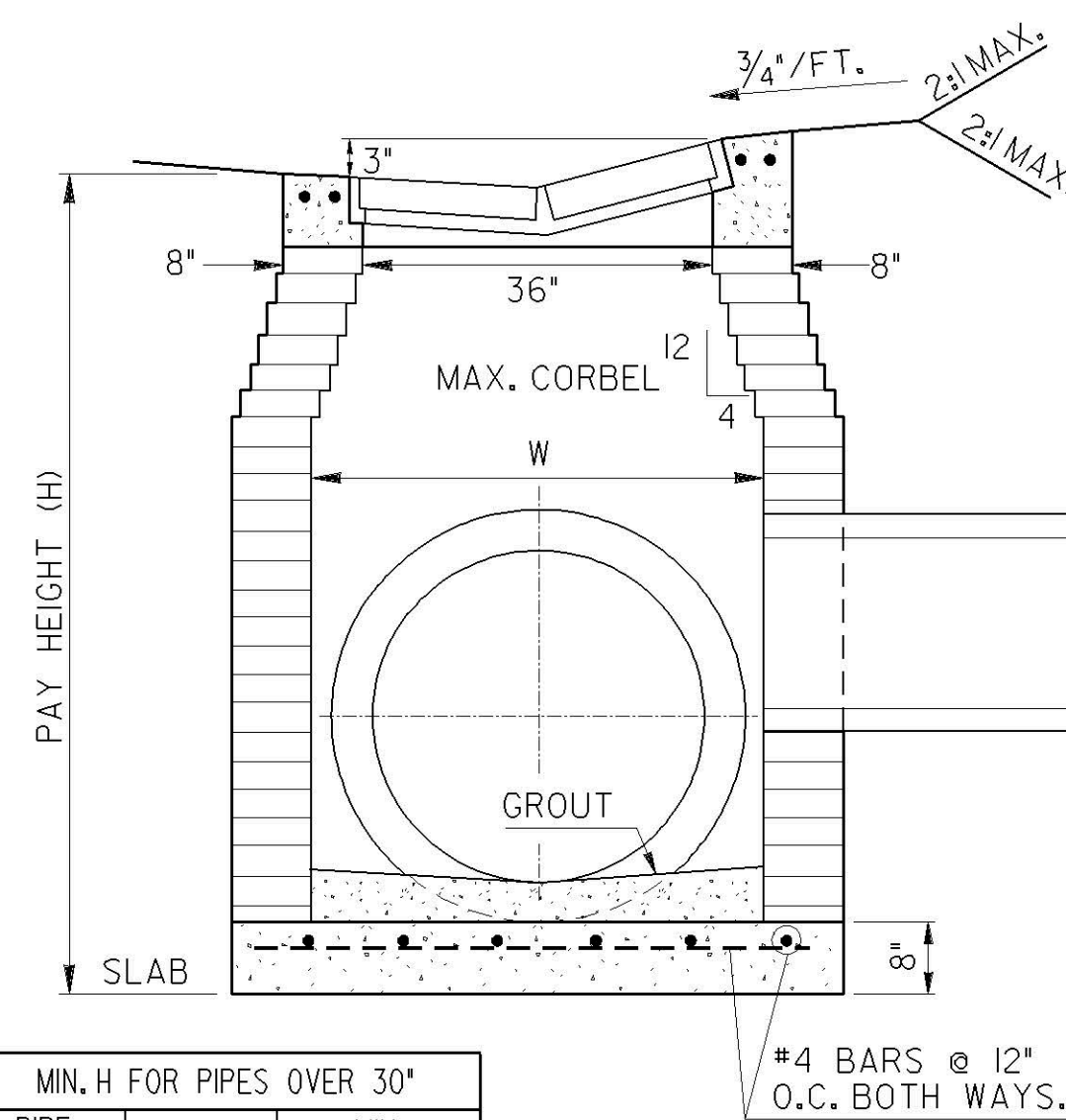
STEPS



NOTE:
STEPS ARE REQUIRED IN ALL INLETS
OVER 4 FT IN HEIGHT. STEPS WILL BE
ALIGNED TO FORM A CONTINUOUS LADDER
WITH RUNGS AT 16" MAXIMUM SPACINGS.
THE CONTRACTOR WILL USE ONLY STEPS
LISTED IN THE GA, D.O.T. OFFICE OF MATERIALS
AND RESEARCH "QUALIFIED PRODUCTS LIST".

TYPE "V" INLET

DETAIL FOR EXTRA WIDTH TYPE "V" INLETS
WHERE REQUIRED TO ACCOMODATE PIPES
LARGER THAN 30" (TYPICAL) OR SKEWED PIPES



MIN. H FOR PIPES TO 30"	
PIPE SIZE	MIN. "H"
15"	3'-9"
18"	4'-2"
24"	4'-9"
30"	5'-4"

THICKNESS OF BRICK WALLS	
DEPTH	THICKNESS
0'-10'	8"
10'-20'	12"
OVER 20'	16"

MIN. H FOR PIPES OVER 30"		
PIPE SIZE	W *	MIN. H
36'	4'-0"	6'-6"
42"	4'-8"	7'-8"
48"	5'-0"	8'-2"
54"	5'-6"	9'-9"
60"	6'-6"	11'-9"

* W TO BE INCREASED WHERE NECESSARY
TO ACCOMMODATE LARGER PIPES OR
PIPES ON SKEWS WITH MINIMUM H
INCREASED ACCORDINGLY.

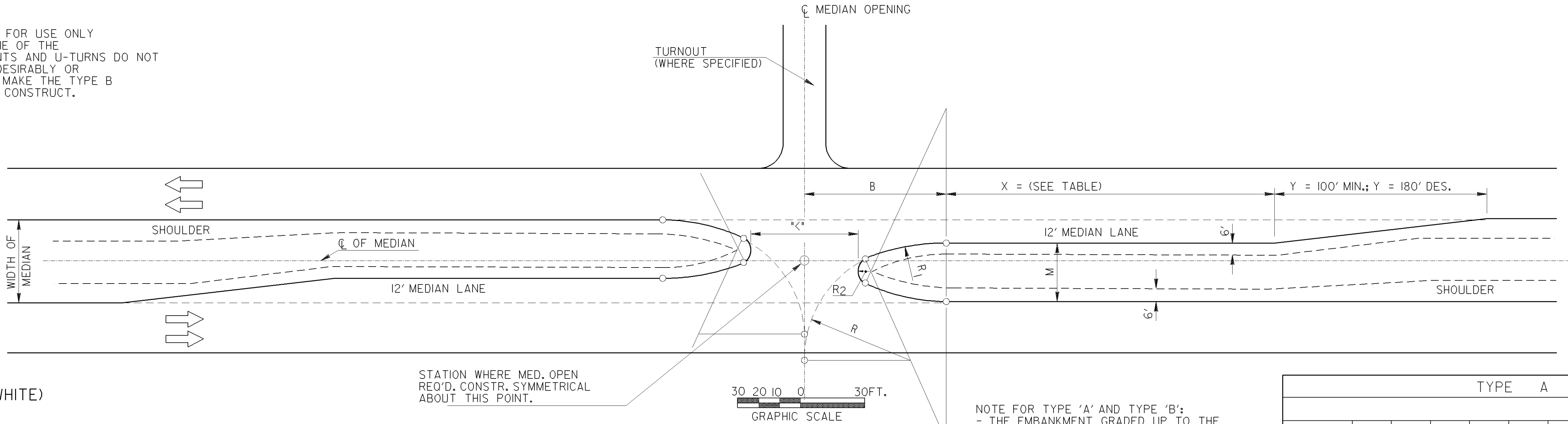
GENERAL NOTES:

1. SEE SECTION 668. OF GEORGIA D.O.T. STANDARD SPECIFICATIONS FOR MATERIALS, CONSTRUCTION DETAILS, MEASUREMENTS, & PAYMENT FOR THIS STRUCTURE, EXCEPT AS NOTED.
2. ALL CONCRETE SHALL BE CLASS "A" FOR BUILT-IN-PLACE INLET CONSTRUCTION. CONCRETE FOR "V" GUTTER MAY BE EITHER CLASS "A" OR PER SECTION 44L. THE COST OF THE "V" GUTTER WILL BE INCLUDED IN THE OVERALL BID PRICE FOR CONCRETE V GUTTER.
3. IF "V" GUTTER INLET SYSTEM IS TERMINATED IN SAG OR LOW AREA, AN EXTENSION OF THE GUTTER PAST LOWEST INLET OR OTHER APPROVED EROSION PROTECTION SHALL BE PROVIDED.
4. CONSTRUCTION ALTERNATES FOR INLETS SHALL BE:
 - (A) BRICK MASONRY AS SHOWN;
 - (B) CIRCULAR PRECAST (SEE TOP LEFT & STD. 1040.)
 - (C) REINFORCED CONCRETE (SEE STD. 1019-A.)
5. MINIMUM INLET DIMENSIONS GIVEN IN THE TABLES ARE TYPICAL FOR CONCRETE PIPE AND MAY BE ADJUSTED WHERE SPECIFIED BY EITHER THE DESIGNER OR THE ENGINEER.
6. THE COST OF THE STEPS AND INSTALLATION OF CHAINS, EYE BOLTS, AND HEX BOLTS SHALL BE INCLUDED IN THE OVERALL BID PRICE FOR DROP INLET.
7. APPLY TACK-WELD BEHIND THE NUT, IF CHAIN IS SECURED TO INLET OR GRATE WITH BOLT AND NUT.
8. TYPE "V" INLET HAS TWO GRATES. EACH GRATE REQUIRES CHAIN AND EYE BOLT INSTALLED.

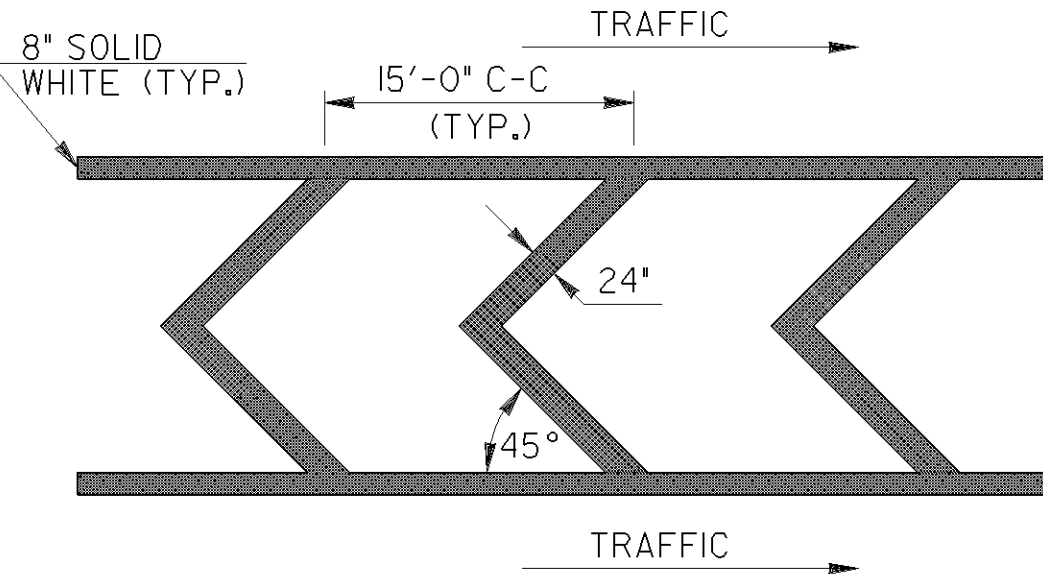
8-16-13	REV. CHAIN GRADE & DETAILS	<div> <div>DEPARTMENT OF TRANSPORTATION</div> <div>STATE OF GEORGIA</div> </div> <div>CONSTRUCTION DETAILS</div> <div>TYPE "V" INLET "V" GUTTER DETAILS</div> <div>NO SCALE</div>	DATE
4-4-11	ADDED GEN. NOTES 7 & 8		7-09-07
	ADDED SAFETY CHAIN		6-14-90
	DETAIL & REV. STEP DETAIL		
	REV. GEN. NOTE NO. 6		
GLO	REV. GEN. NOTE NUMBER 2.		
	GENERAL REVISION		
B.U.			
GLO			
GLO			
BY			NUMBER D-33

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.			

NOTE:
TYPE A MEDIAN CROSSOVERS ARE FOR USE ONLY WHERE THE FUTURE TOTAL VOLUME OF THE COMBINED LEFT TURNING MOVEMENTS AND U-TURNS DO NOT EXCEED 20 VEHICLES PER HOUR, DESIRABLY OR WHERE DRAINAGE CONSIDERATIONS MAKE THE TYPE B MEDIAN CROSSOVER DIFFICULT TO CONSTRUCT.



DETAIL "B" (WHITE)



NOTE:
SQUARE YARDS OF STRIPING SHOWN ON PLAN AND SUMMARY SHEETS INCLUDES THE AREA WITHIN THE BORDERS, AS WELL AS THE 8" SOLID WHITE BORDER.

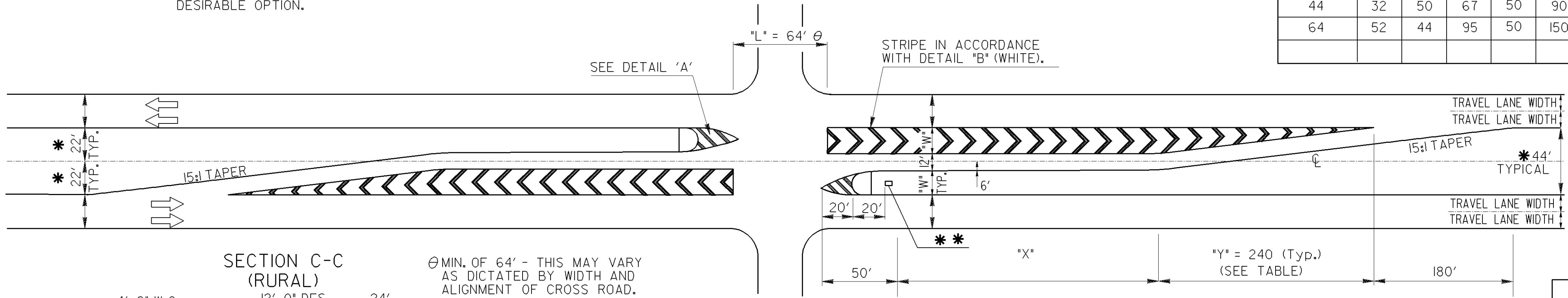
NOTE:
TYPE B MEDIAN CROSSOVERS ARE THE PREFERRED TYPE OF MEDIAN CROSSOVER. TYPE A MEDIAN CROSSOVER CAN BE USED IN LOW VOLUME SITUATIONS WHERE DRAINAGE CONSIDERATIONS MAKE THE TYPE A MEDIAN CROSSOVER A MORE DESIRABLE OPTION.

TYPE A MEDIAN CROSSOVER

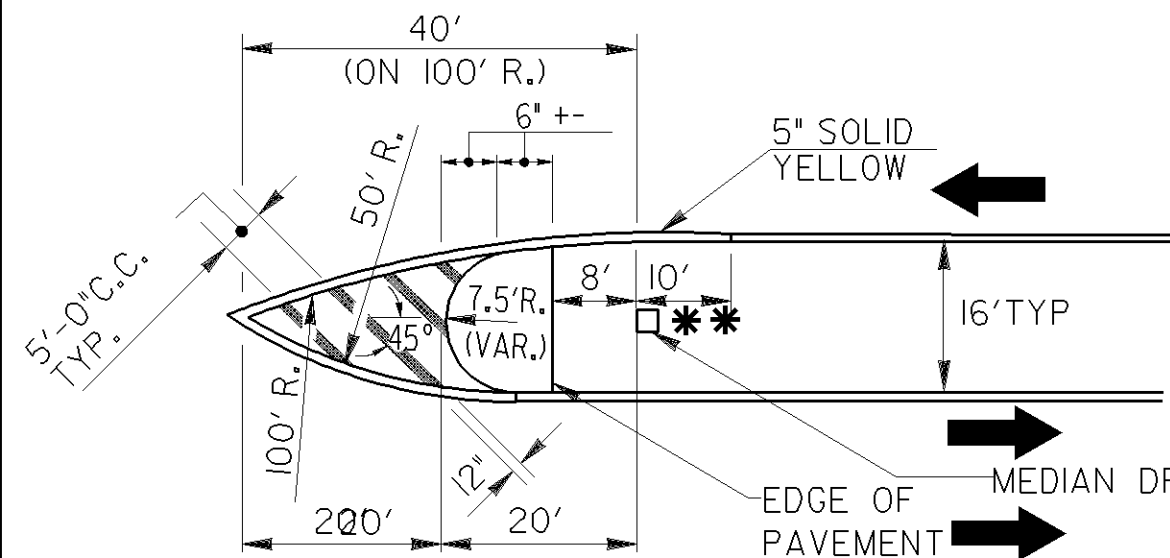
NOTE FOR TYPE 'A' AND TYPE 'B':
- THE EMBANKMENT GRADED UP TO THE MEDIAN CROSSOVERS SHALL BE SLOPED AT 20% DESIRABLE, 10% MIN. NORMALLY, WITH A 6% ACCEPTABLE FOR SPEEDS UNDER FORTY-FIVE MILES PER HOUR.

TYPE A MEDIAN CROSSOVERS

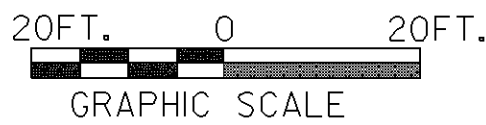
WIDTH OF MEDIAN	M	L NORM	B NORM	R	R ₁	R ₂	DECELERATION LENGTH = X Δ (FT)			Y (DES)
							DESIGN SPEED			
							45 MPH	55 MPH	65 MPH	
40	28	50	67	50	90	6	400(250) MIN	525(400) MIN	700(525) MIN	180
44	32	50	67	50	90	8	400(250) MIN	525(400) MIN	700(525) MIN	180
64	52	44	95	50	150	10	400(250) MIN	525(400) MIN	700(525) MIN	180



Δ "X" DIMENSION IS FOR DECELERATION ONLY, DOES NOT ACCOUNT FOR ANY STORAGE NEEDED. MIN. VALUES FOR "X" ARE ONLY TO BE USED WHERE SPACING BETWEEN MEDIAN OPENINGS DOES NOT ALLOW FOR THE MORE DESIRABLE LENGTH.



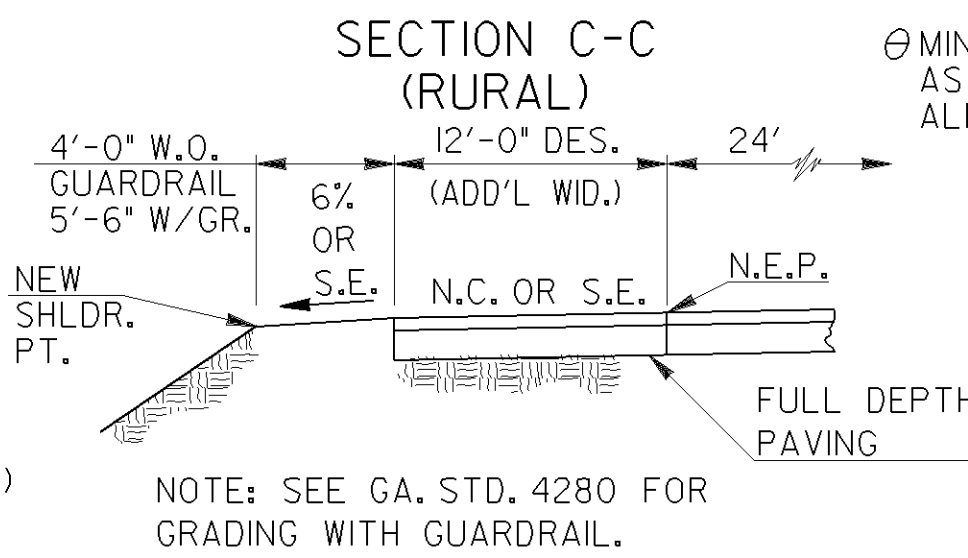
DETAIL "A" (YELLOW)



TYPE C MEDIAN CROSSOVERS	
DECELERATION LENGTH = X	
DESIGN SPEED	X (FT)
35 MPH	300(200MIN.)
45 MPH	400(250MIN.)

■ "X" DIMENSION IS FOR DECELERATION ONLY, DOES NOT ACCOUNT FOR ANY STORAGE NEEDED.

NOTE:
- THE TYPE C MEDIAN CROSSOVER SHOWN IS TYPICAL FOR ONE SIDE ROAD CONNECTION (T-INTERSECTION)
- THE BOTTOM PORTION OF TYPE C IS APPLICABLE ON EACH SIDE OF THE CROSSOVER FOR A CROSS ROAD INTERSECTION OR SIDE ROAD CONNECTION ON EACH SIDE (X-INTERSECTION)
- THE TOP PORTION OF TYPE C DETAIL IS APPLICABLE ON EACH SIDE OF THE MEDIAN OPENING WITHOUT ANY SIDE ROAD (U-TURNS ONLY)



NOTE: SEE GA. STD. 4280 FOR GRADING WITH GUARDRAIL.

TYPE B MEDIAN CROSSOVER

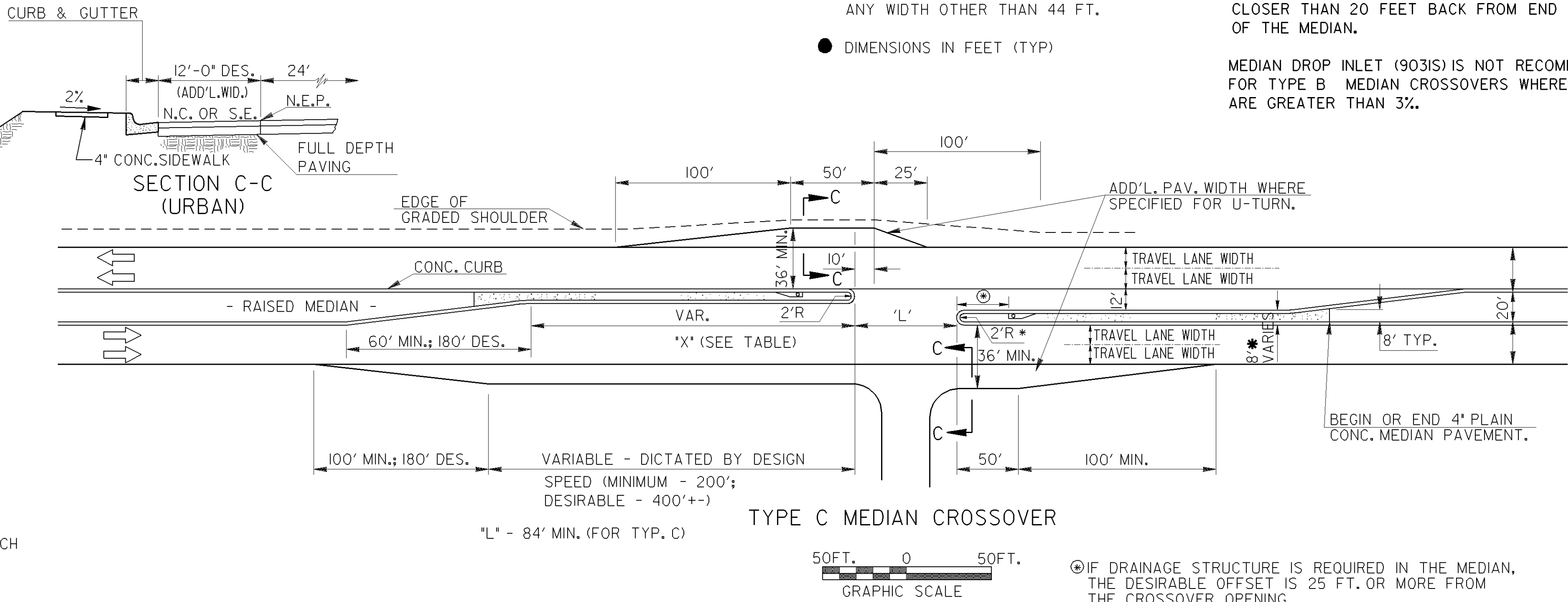
* DIMENSION MAY VARY WHERE SPECIFIED IN THE PLANS. ADJUSTMENTS TO BE SHOWN FOR ANY WIDTH OTHER THAN 44 FT.

● DIMENSIONS IN FEET (TYP)

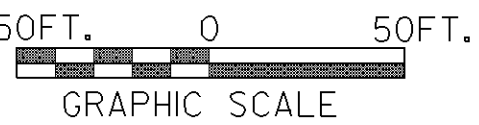
** MEDIAN DROP INLET (903IS) CANNOT BE PLACED CLOSER THAN 20 FEET BACK FROM END OF NOSE OF THE MEDIAN.

MEDIAN DROP INLET (903IS) IS NOT RECOMMENDED FOR TYPE B MEDIAN CROSSOVERS WHERE GRADES ARE GREATER THAN 3%.

TYPE B MEDIAN CROSSOVERS						
		DECELERATION LENGTH = Δ(FT.)				
WIDTH OF MEDIAN	DESIGN SPEED			Y	W	
	45 MPH	55 MPH	65 MPH			
44	150(50MIN)	300(150MIN)	450(300MIN)	240	16	
64	N/A	150(50MIN)	300(150MIN)	390	26	



TYPE C MEDIAN CROSSOVER



● IF DRAINAGE STRUCTURE IS REQUIRED IN THE MEDIAN, THE DESIRABLE OFFSET IS 25 FT. OR MORE FROM THE CROSSOVER OPENING.

SPECIAL NOTE:
THE "L" DIMENSIONS SHOWN FOR TYPE A, TYPE B, AND TYPE C CROSSOVERS ARE BASED UPON 50FT. CONTROL RADII FOR LEFT TURNS AND INTERSECTING CROSSROADS OF TWO 12 FT. LANES PERPENDICULAR TO THE MAINLINE. DIFFERENT "L" DIMENSIONS MAY BE SPECIFIED AT LOCATIONS WHERE WARRANTED BY OTHER CONDITIONS.

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

CONSTRUCTION DETAILS
MEDIAN CROSSOVERS

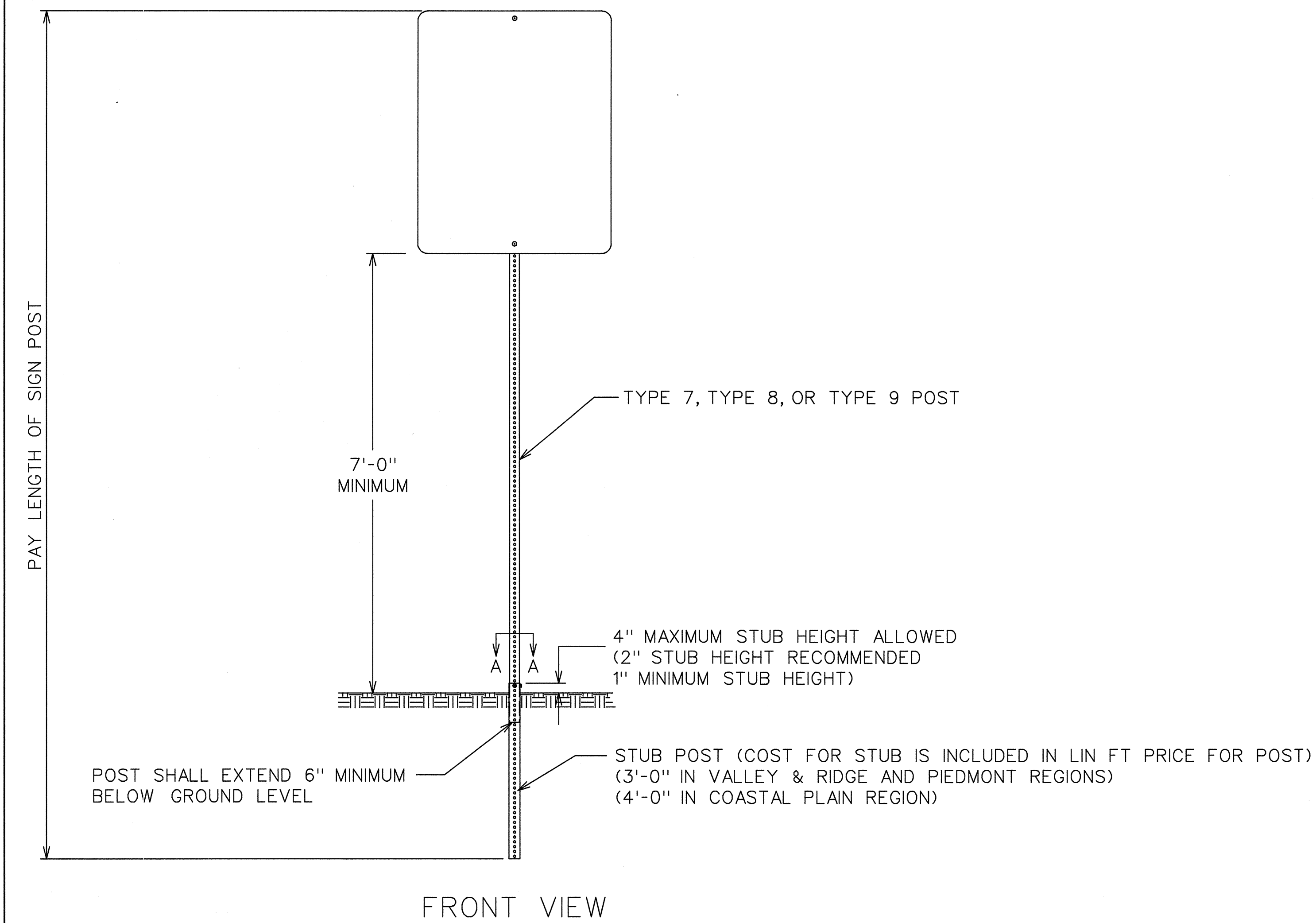
SCALE AS SHOWN

APRIL, 2010

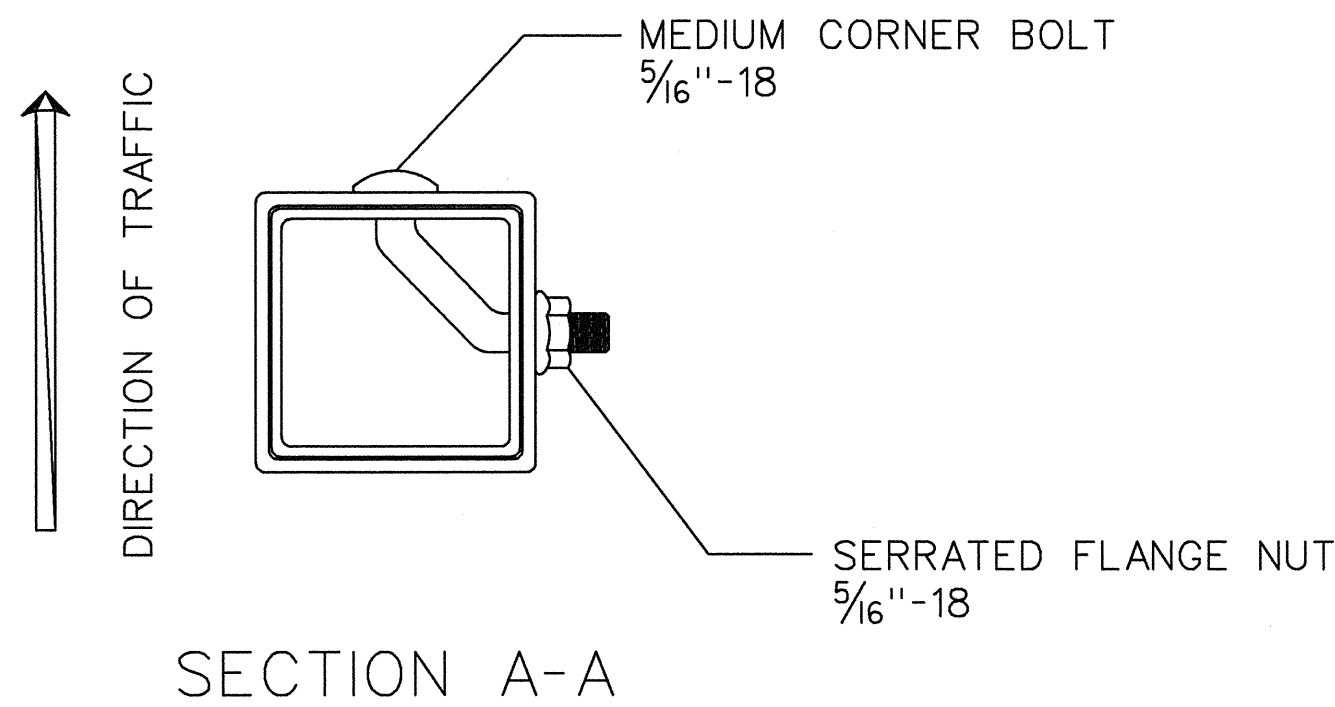
BY
DES. MGR
DRW. CJ
CHK. BRE
REVIEW BAS

NUMBER
M-3A

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.

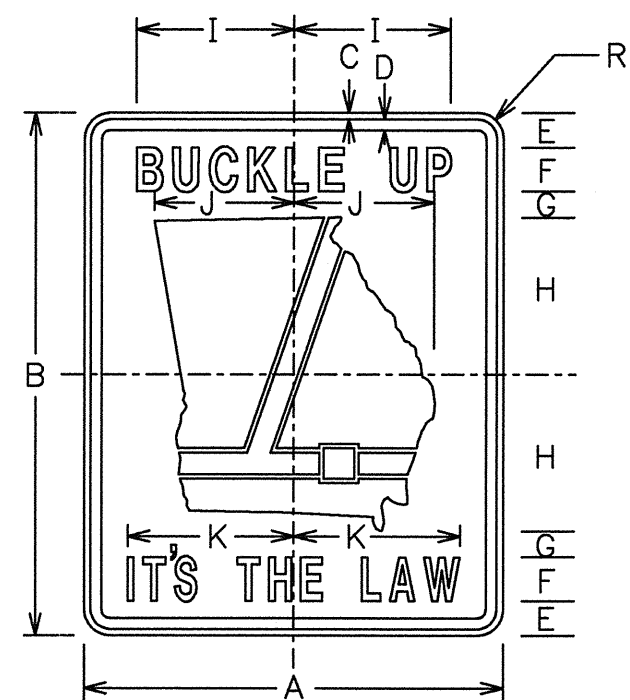
SIGN PLATE SHALL NOT EXCEED 48" IN WIDTH ON A SINGLE POST.

* 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

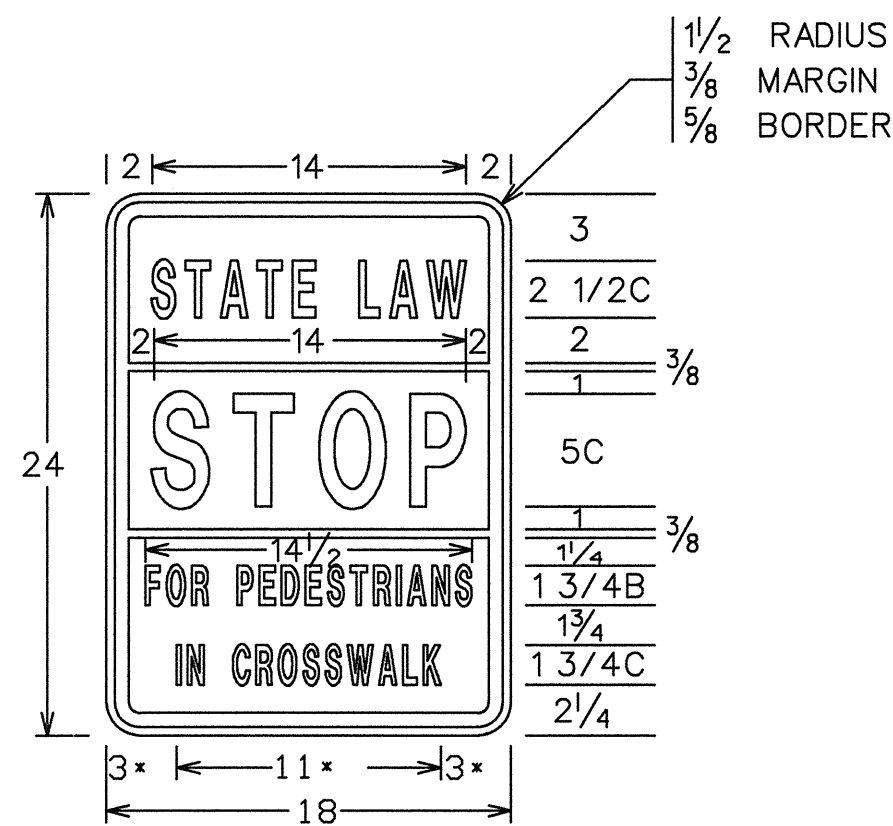
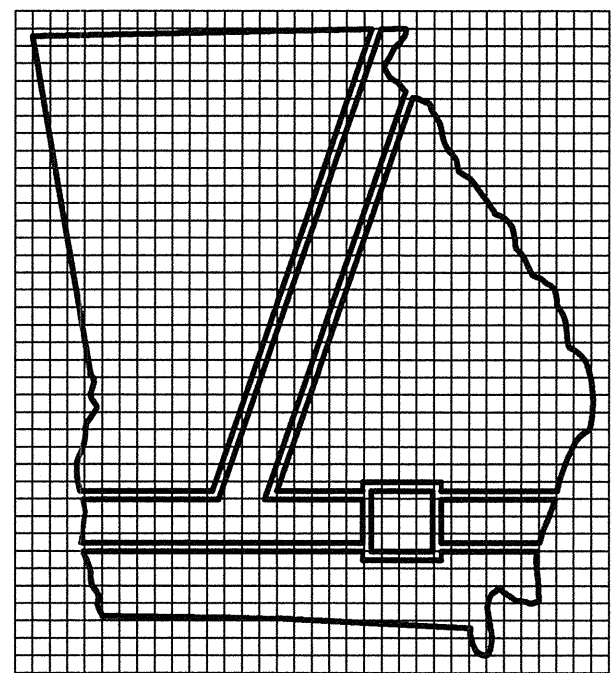
STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.			



R560-1

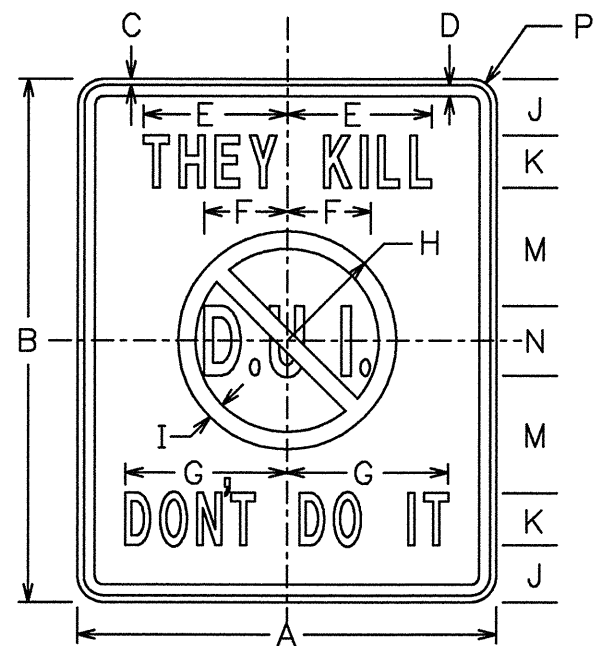
SIGN	DIMENSIONS (INCHES)											
	A	B	C	D	E	F	G	H	I	J	K	R
MIN & STD	30	36	1/2	3/4	2 1/2	3C	1 1/2	11	8 1/2	10	11	1 7/8
FWY	48	60	3/4	1 1/4	4	5C	3	18	15 1/2	16	18	3

COLORS
STATE SHIELD & BORDER - RED (REFL)
LEGEND & BELT - BLACK (NON-REFL)
BACKGROUND - WHITE (REFL)



R560-5

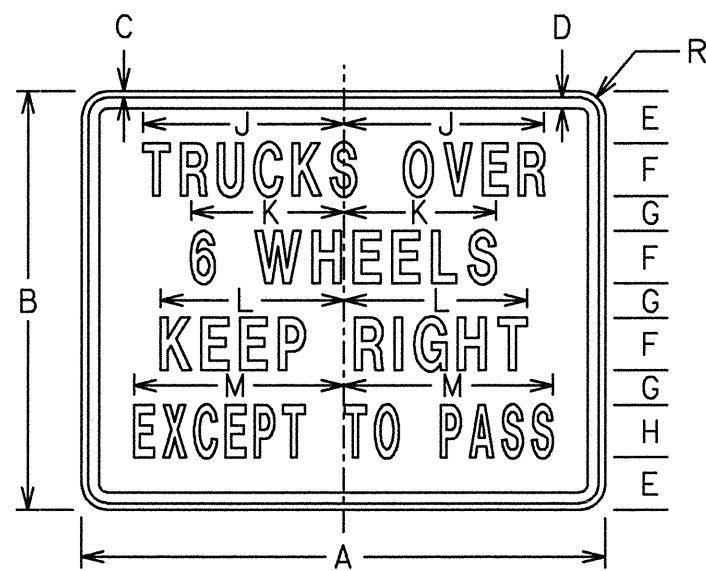
COLORS
LEGEND & BORDER - BLACK (NON-REFL)
WORD "STOP" - RED (REFL)
BACKGROUND - WHITE (REFL)



R560-2

SIGN	DIMENSIONS (INCHES)															
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	P	
MIN & STD	30	36	1/2	3/4	11	5	12 1/2	7 1/2	1 1/4	4	4C	3	4 1/2	5C	1 7/8	
FWY	48	60	3/4	1 1/4	16 1/2	9 1/2	18 1/2	12 1/2	2	6 1/2	6C	5	8 1/2	8C	3	

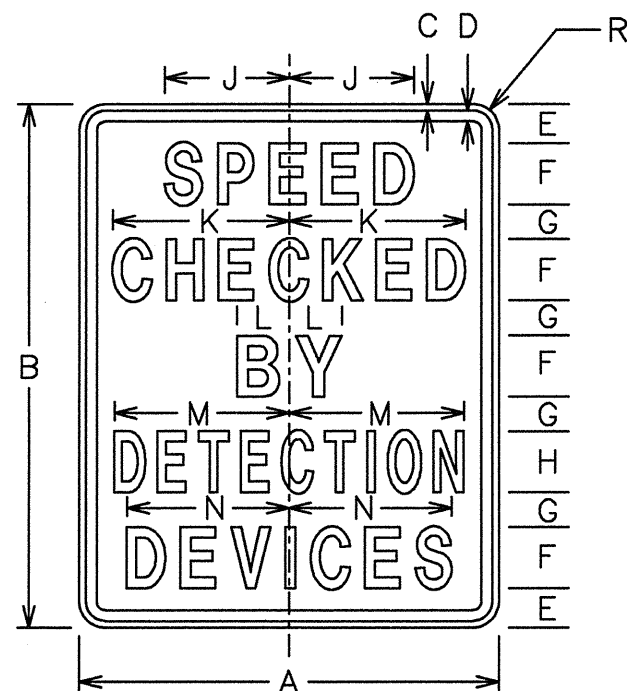
COLORS
CIRCLE & DIAGONAL - RED (REFL)
LEGEND & BORDER - BLACK (NON-REFL)
BACKGROUND - WHITE (REFL)



R560-3

SIGN	DIMENSIONS (INCHES)														
	A	B	C	D	E	F	G	H	J	K	L	M	R		
MIN & STD	36	30	1/2	3/4	3 1/2	3 1/2	C	3	3 1/2	8	14	10	11 1/2	14 1/2	17 3/8
FWY	60	48	3/4	1 1/4	6	6C	4	6B	23	17 1/2	21	24	3		

COLORS
LEGEND & BORDER - BLACK (NON-REFL)
BACKGROUND - WHITE (REFL)



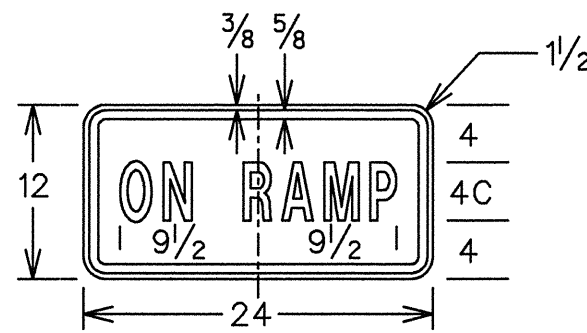
I550-1

SIGN	DIMENSIONS (INCHES)													
	A	B	C	D	E	F	G	H	J	K	L	M	N	R
MIN & STD	30	36	1/2	3/4	4	4D	2	4C	8 3/16	11 3/16	3 7/16	11 7/16	10 5/8	1 7/8
FWY	48	60	3/4	1 1/4	4 1/2	7D	4	7C	14 5/16	20 3/16	6	20	16 3/8	3

COLORS
LEGEND & BORDER - BLACK (NON-REFL)
BACKGROUND - WHITE (REFL)

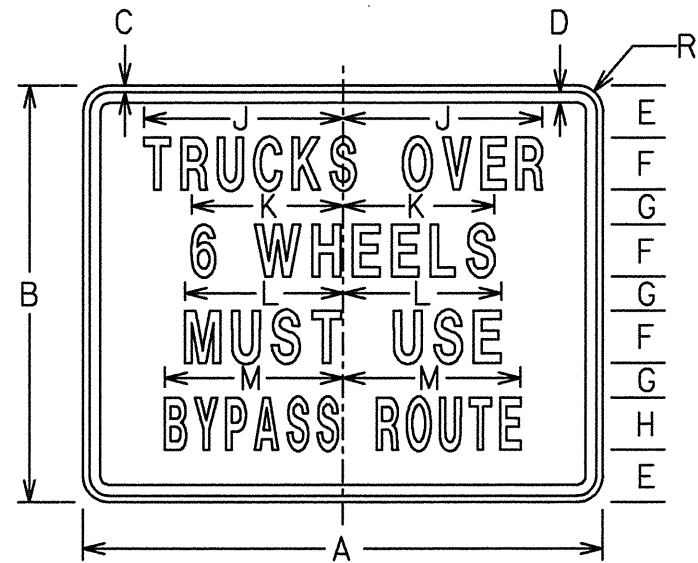
THE I550-1 SIGN SHALL BE ERECTED:

- ON EVERY HIGHWAY THAT COMPRISES A PART OF THE STATE HIGHWAY SYSTEM AT THAT POINT ON THE HIGHWAY WHICH INTERSECTS THE STATE LINE.
- AT THE TERMINI OF EVERY HIGHWAY THAT COMPRISES A PART OF THE STATE HIGHWAY SYSTEM WHICH BEGINS OR ENDS WITHIN THE STATE BOUNDARIES.
- ON EVERY HIGHWAY THAT COMPRISES A PART OF THE STATE HIGHWAY SYSTEM AT THAT POINT ON THE HIGHWAY WHERE TRAFFIC FROM OUTSIDE THE COUNTY FIRST ENTERS A COUNTY THAT HAS A PERMIT TO OPERATE SPEED DETECTION DEVICES, AND
- ON EVERY HIGHWAY THAT COMPRISES A PART OF THE STATE HIGHWAY SYSTEM AT THAT POINT ON THE HIGHWAY WHERE TRAFFIC FIRST ENTERS THE CORPORATE LIMITS OF ANY MUNICIPALITY THAT HAS A PERMIT TO OPERATE SPEED DETECTION DEVICES.



R8-3aP

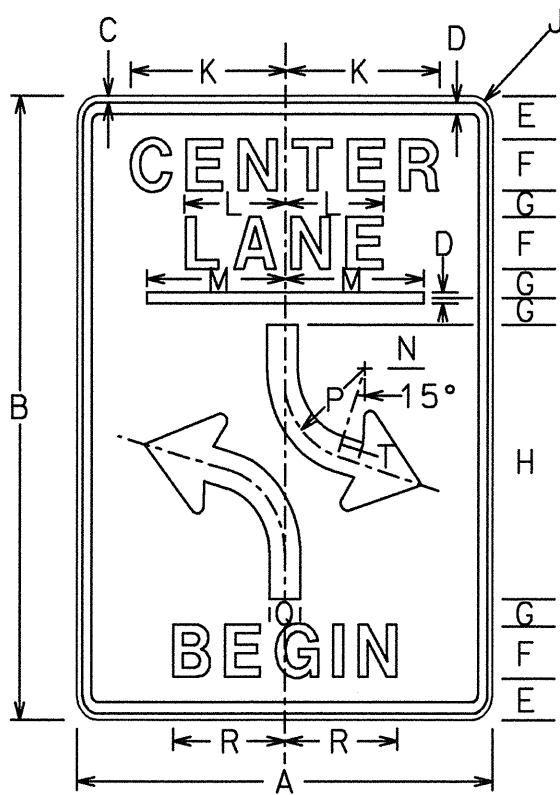
COLORS
LEGEND & BORDER - RED (REFL)
BACKGROUND - WHITE (REFL)



R560-4

SIGN	DIMENSIONS (INCHES)														
	A	B	C	D	E	F	G	H	J	K	L	M	R		
MIN & STD	36	30	1/2	3/4	3 1/2	3 1/2	C	3	3 1/2	8	14	10	10	12 1/2	1 7/8
FWY	60	48	3/4	1 1/4	6	6C	4	6C	23	17 1/2	17 1/2	25 1/2	3		

COLORS
LEGEND & BORDER - BLACK (NON-REFL)
BACKGROUND - WHITE (REFL)



R3-9B(BEGIN)

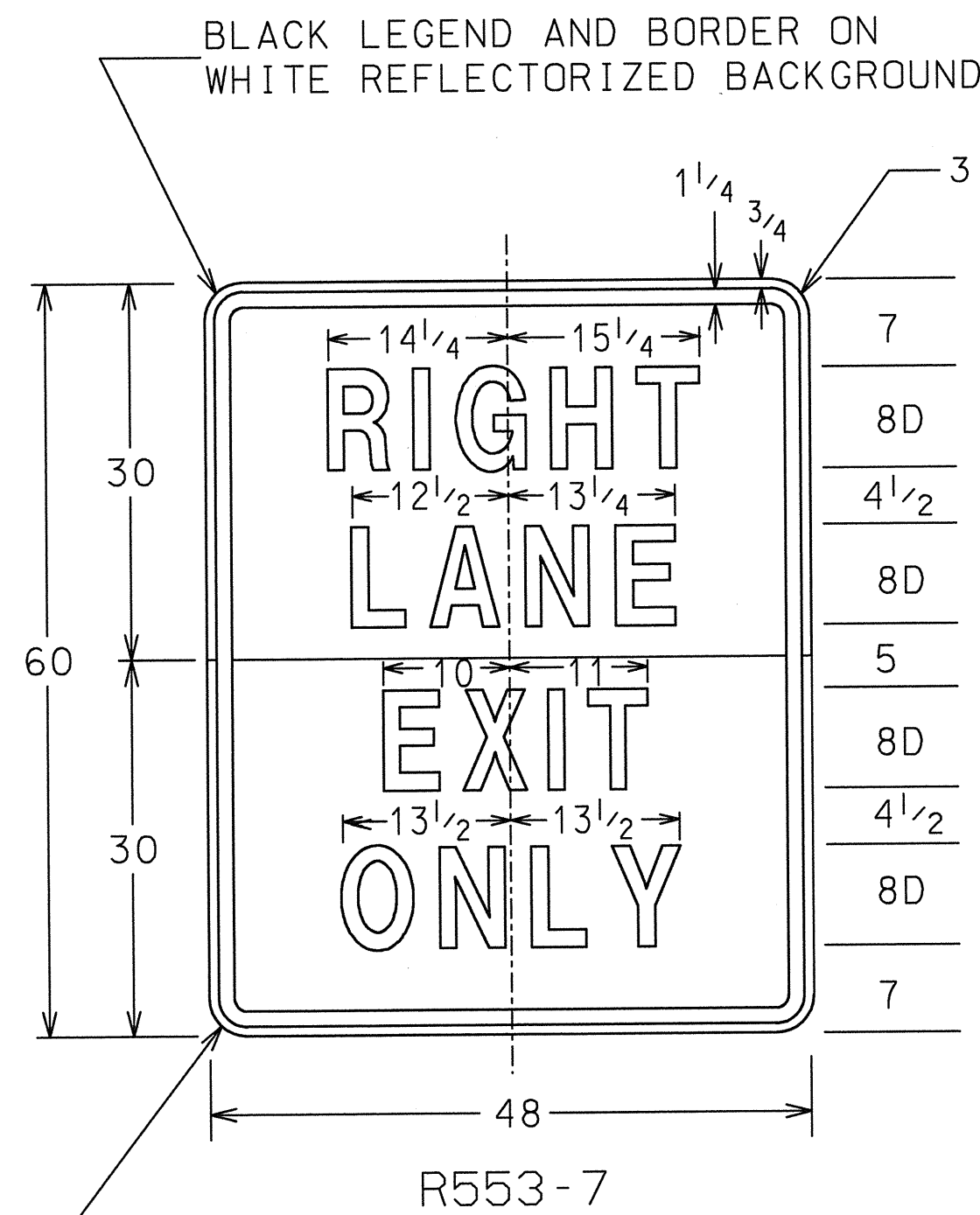
END
I S I S I

R3-9B(END)

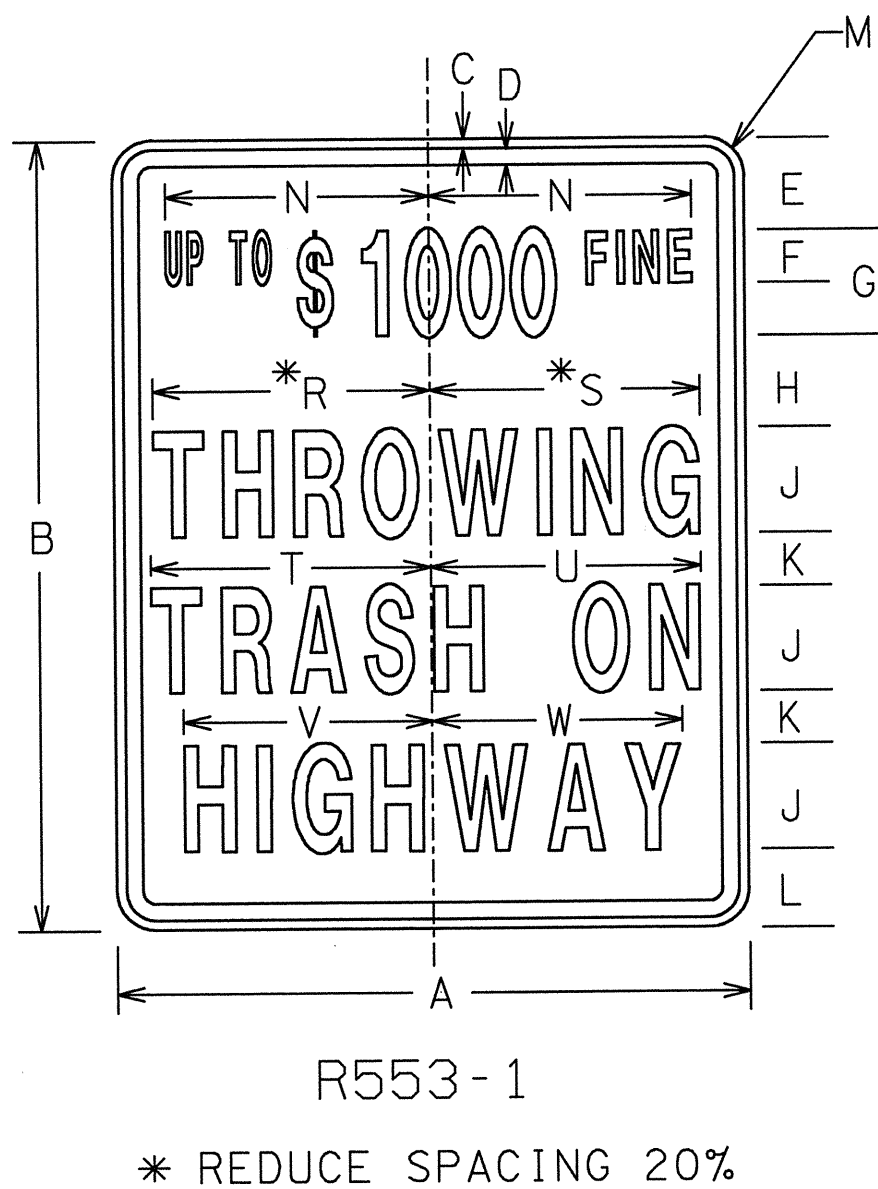
SIGN	DIMENSIONS (INCHES)																		
	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	
STD & MIN	24	36	3/8	5/8	2 1/2	3E	1 1/2	16	1 1/2	8 1/16	5 3/4	8	2 1/2	6	2	6 7/16	4 3/16	1 1/2	
SPECIAL	36	48	5/8	7/8	3 1/2	5E	1 1/2	20	2 1/4	14 1/16	9 1/2	12	3	8	3	7 11/16	4 5/16	2	

COLORS
LEGEND & BORDER - BLACK (NON-REFL)
BACKGROUND - WHITE (REFL)

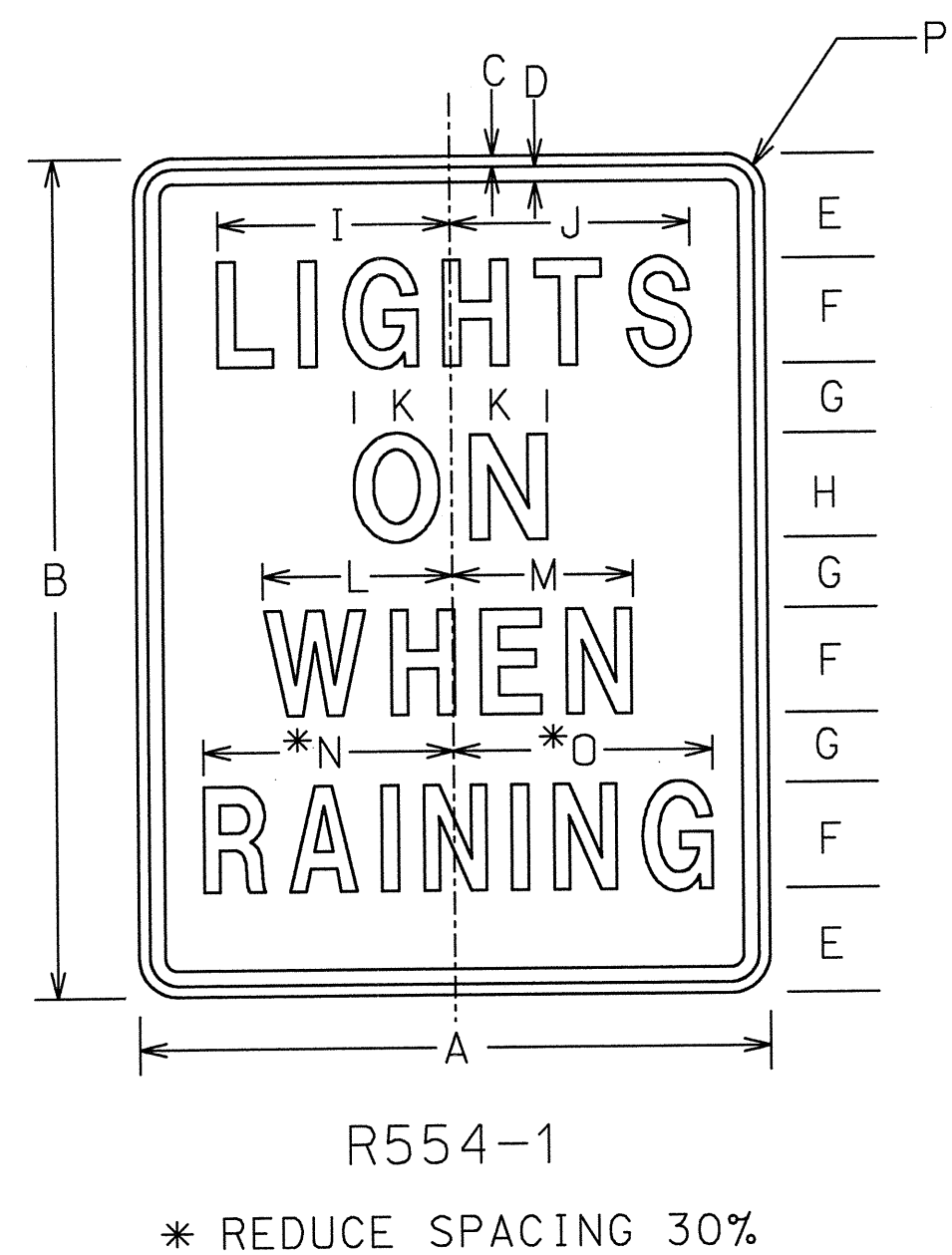
DATE	REVISIONS	GEORGIA DEPARTMENT OF TRANSPORTATION OFFICE OF TRAFFIC SAFETY & DESIGN
5-24-00	ADDED R9-8 DETAIL	
1-21-03	DELETED R1-4 SIGNS	
1-21-03	REV SIGN CODES FOR R3-9 SIGNS	
		DETAILS OF REGULATORY SIGNS SHEET 1 OF 2
		NO SCALE JANUARY 2000



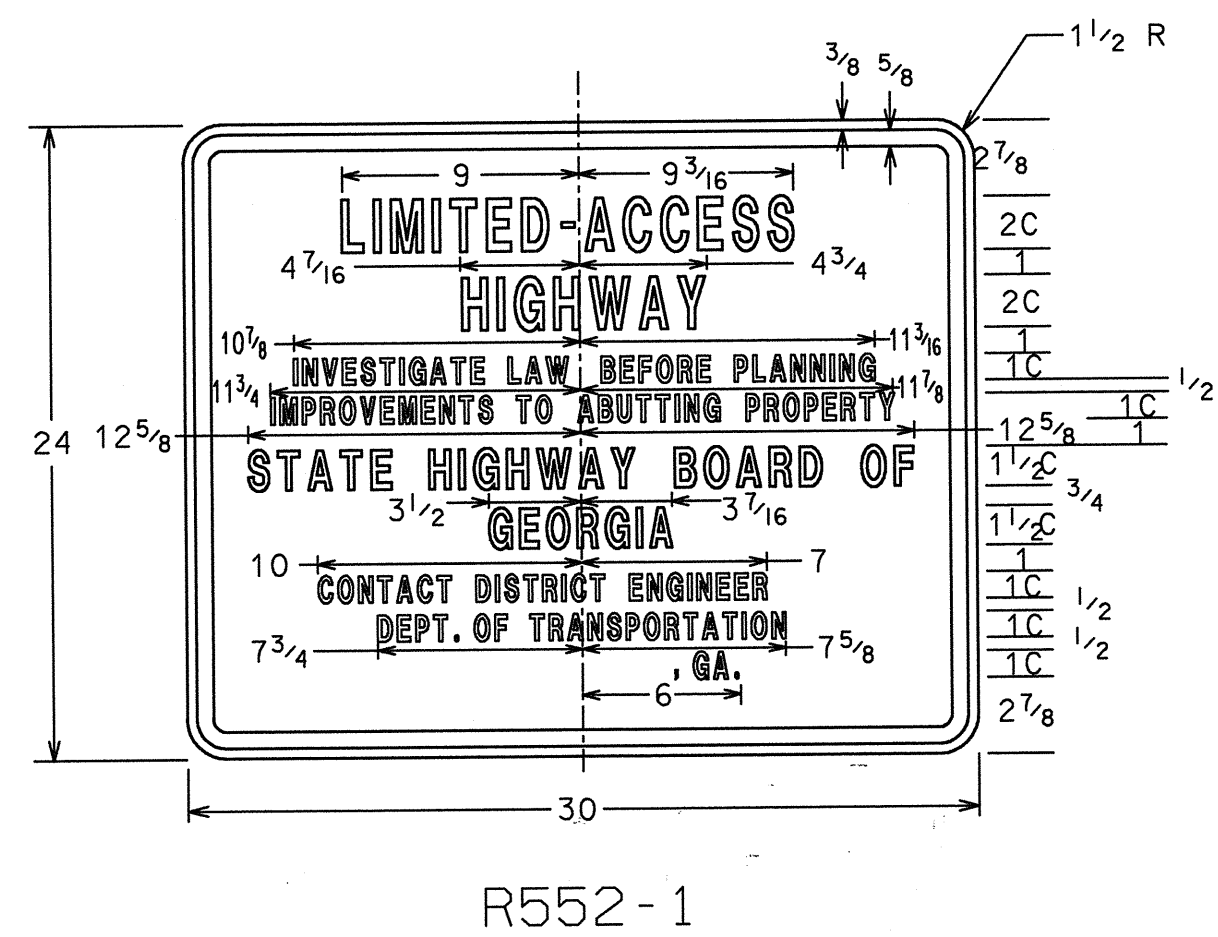
BLACK LEGEND AND BORDER ON YELLOW REFLECTORIZED BACKGROUND



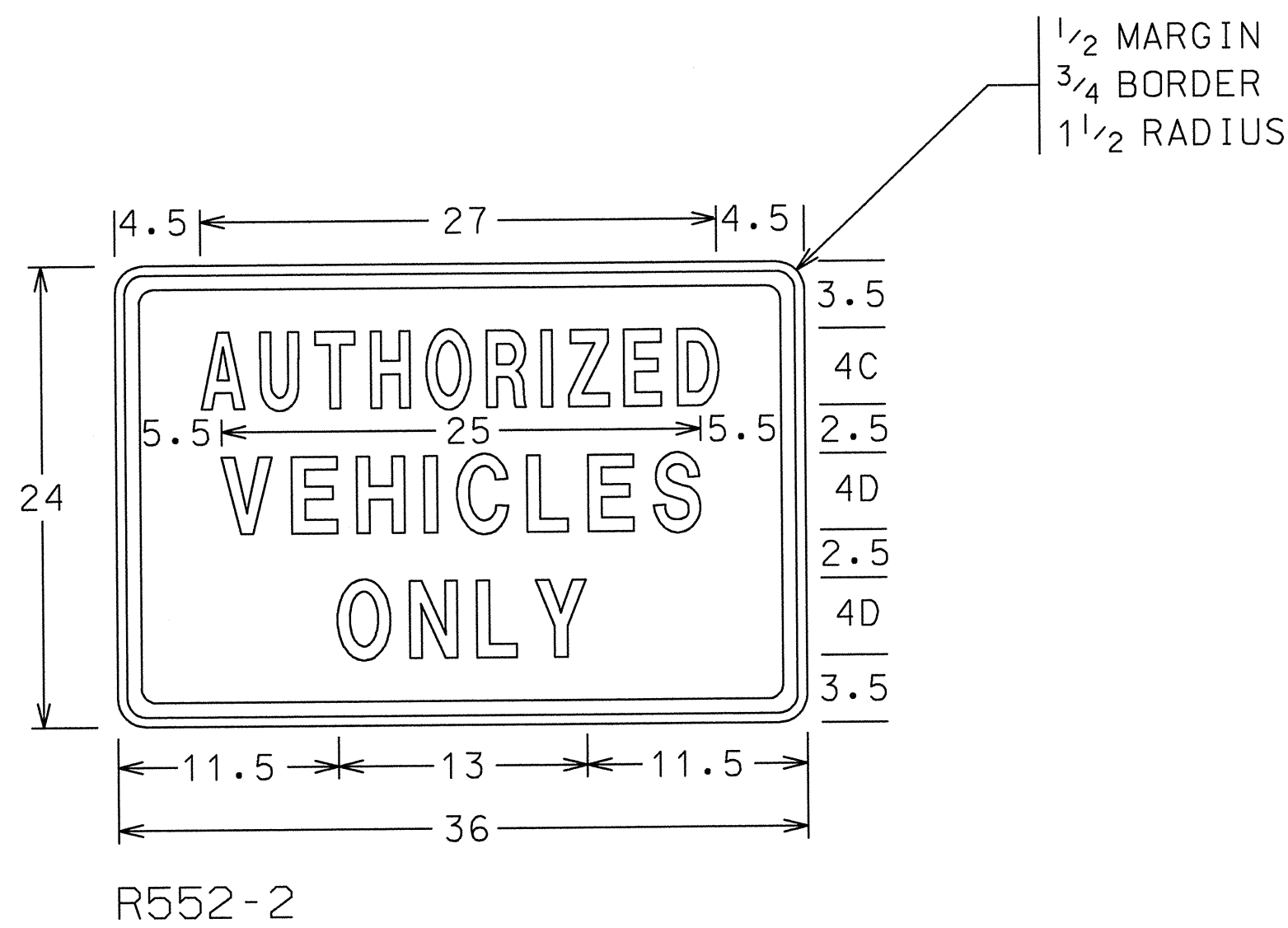
SIGN	DIMENSIONS (INCHES)																		
	A	B	C	D	E	F	G	H	J	K	L	M	N	R	S	T	U	V	W
STD & MIN	24	30	3/8	5/8	3 1/2	2B	4C	3 1/2	4C	2	3	1 1/2	10	10 1/2	10 1/4	10 3/4	10 1/8	9 3/8	9 1/2
EXPWY	36	48	5/8	7/8	6	3B	6C	6	6C	3	6	2 1/4	15	15 3/4	15 3/8	16 1/8	15 3/16	14 1/16	14 1/4
FWY	48	60	3/4	1 1/4	7	4B	7C	8	8C	4	6	3	20	21	20 1/2	21 1/2	20 1/4	18 3/4	19



SIGN	DIMENSIONS (INCHES)																		
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P			
STD & MIN	24	30	3/8	5/8	3 1/2	2B	4C	3 1/2	4C	2	3	1 1/2	10	10 1/2	10 1/4	10 3/4	10 1/8	9 3/8	9 1/2
EXPWY	36	48	5/8	7/8	6	3B	6C	6	6C	3	6	2 1/4	15	15 3/4	15 3/8	16 1/8	15 3/16	14 1/16	14 1/4
FWY	48	60	3/4	1 1/4	7	4B	7C	8	8C	4	6	3	20	21	20 1/2	21 1/2	20 1/4	18 3/4	19

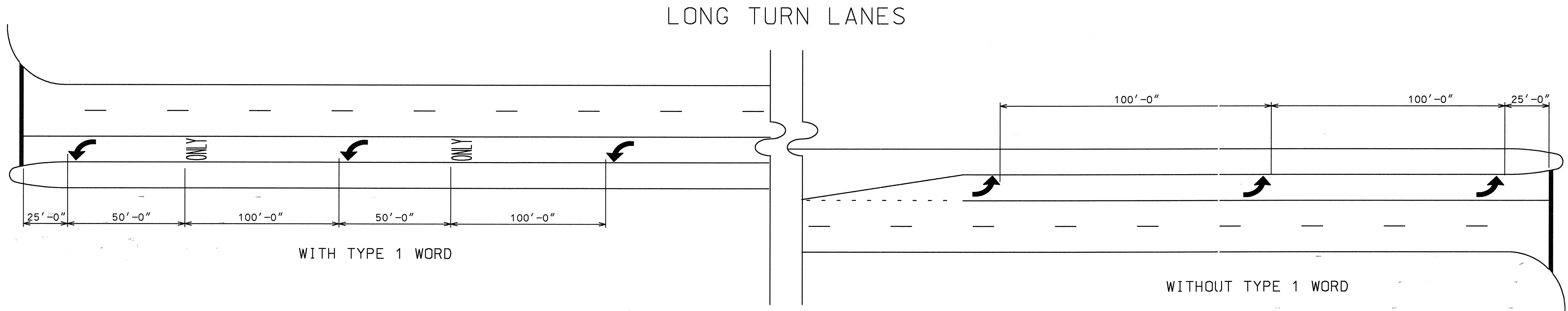
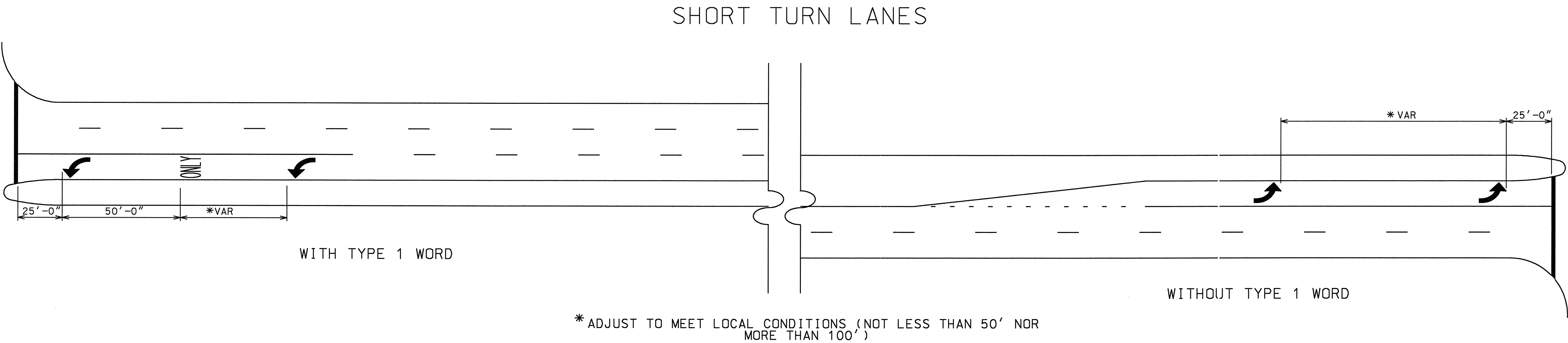
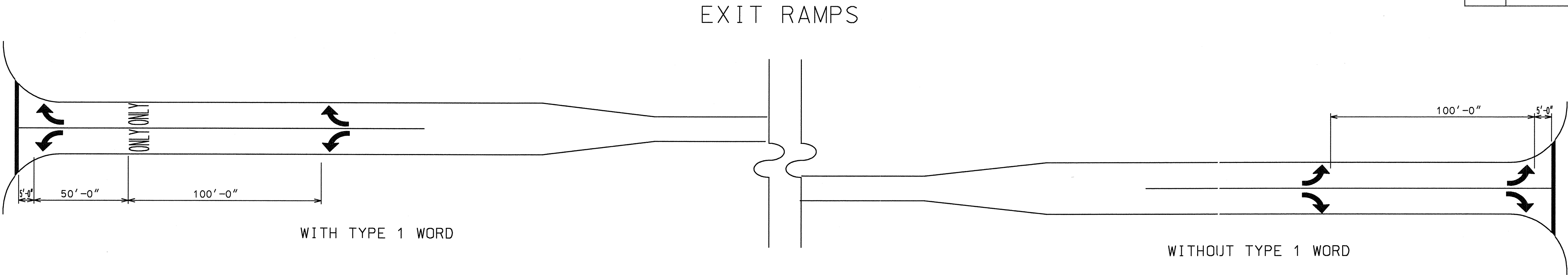


← 4 → 3 →
GAINSVILLE
2 1/4 → 3 →
TENNILLE
← 4 1/16 → 3 →
THOMASTON
11 1/16 → 3 →
TIFFON
9 1/16 → 3 →
JESUP
← 5 3/8 → 3 →
CARTERSVILLE
1 3/4 → 3 →
ATLANTA



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.			

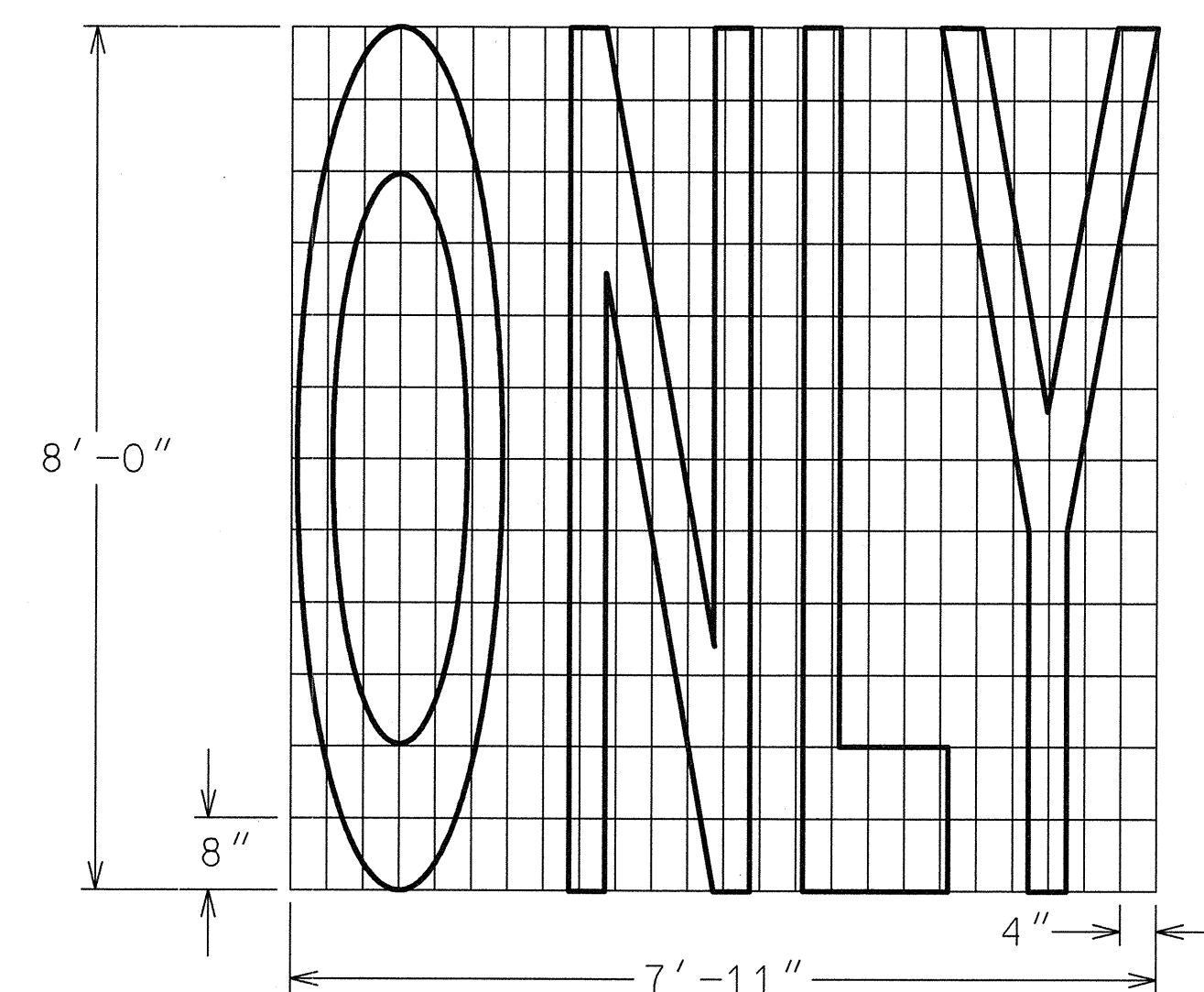


GENERAL NOTES:

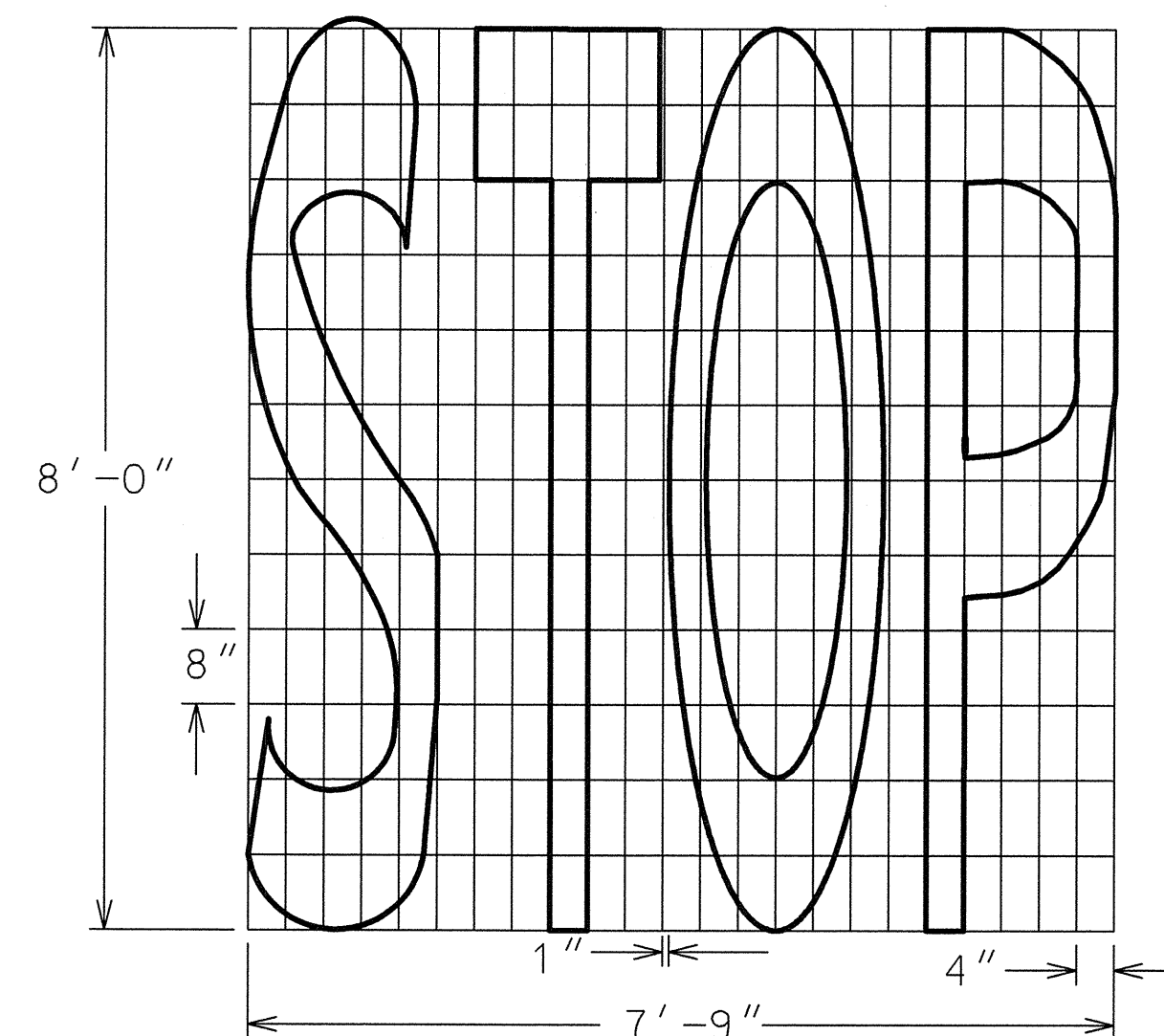
- SPACING OF TYPE 2 ARROW IS REPRESENTATIVE OF SPACING FOR TYPE 1, TYPE 3, TYPE 4, & TYPE 5 ARROWS.
- ALL TURNING LANES SHALL HAVE A MINIMUM OF 2 ARROWS.
- GROUND MOUNTED OR OVERHEAD SIGNING SHALL BE SUPPLEMENTED BY TYPE 1 WORD.

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

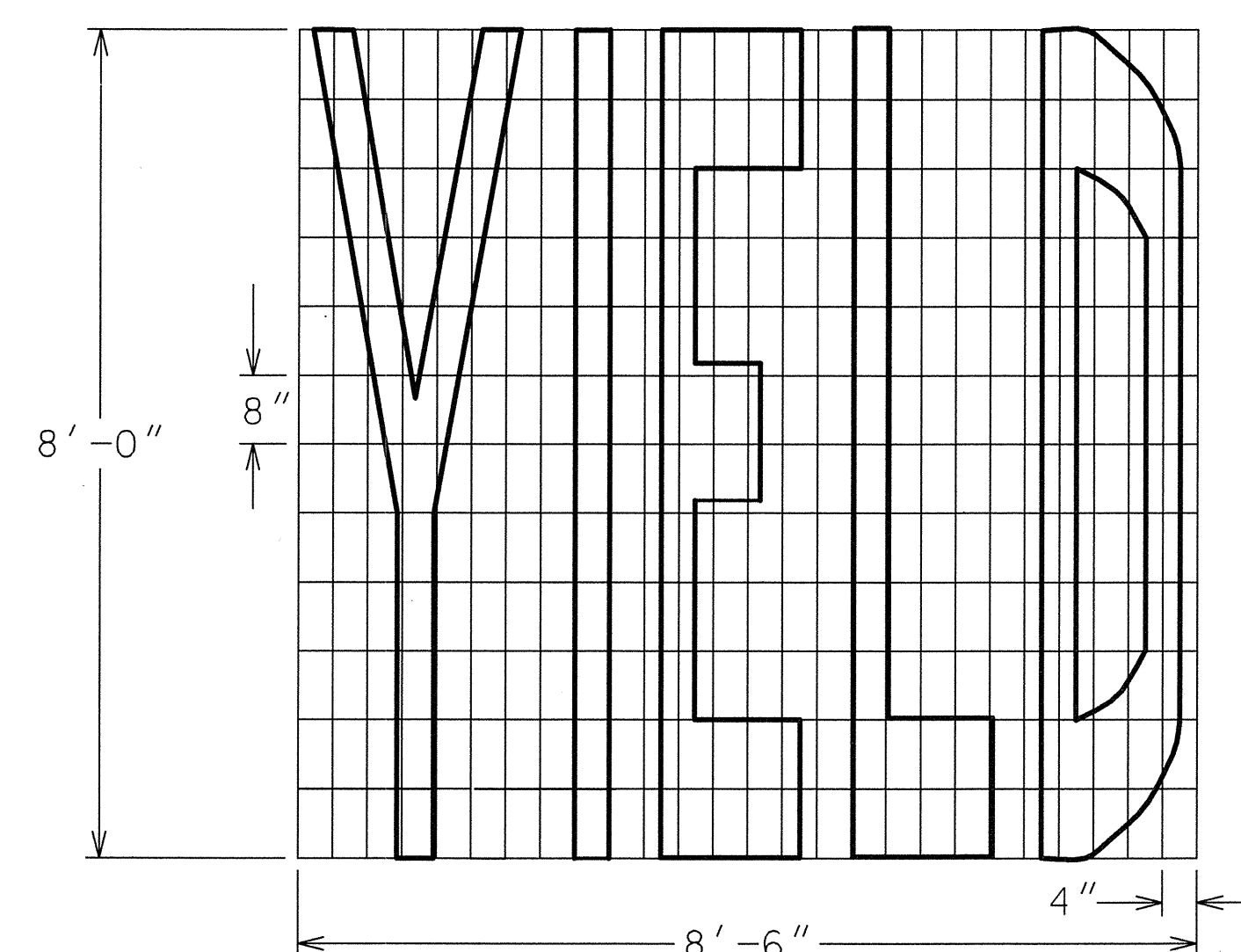
STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.			



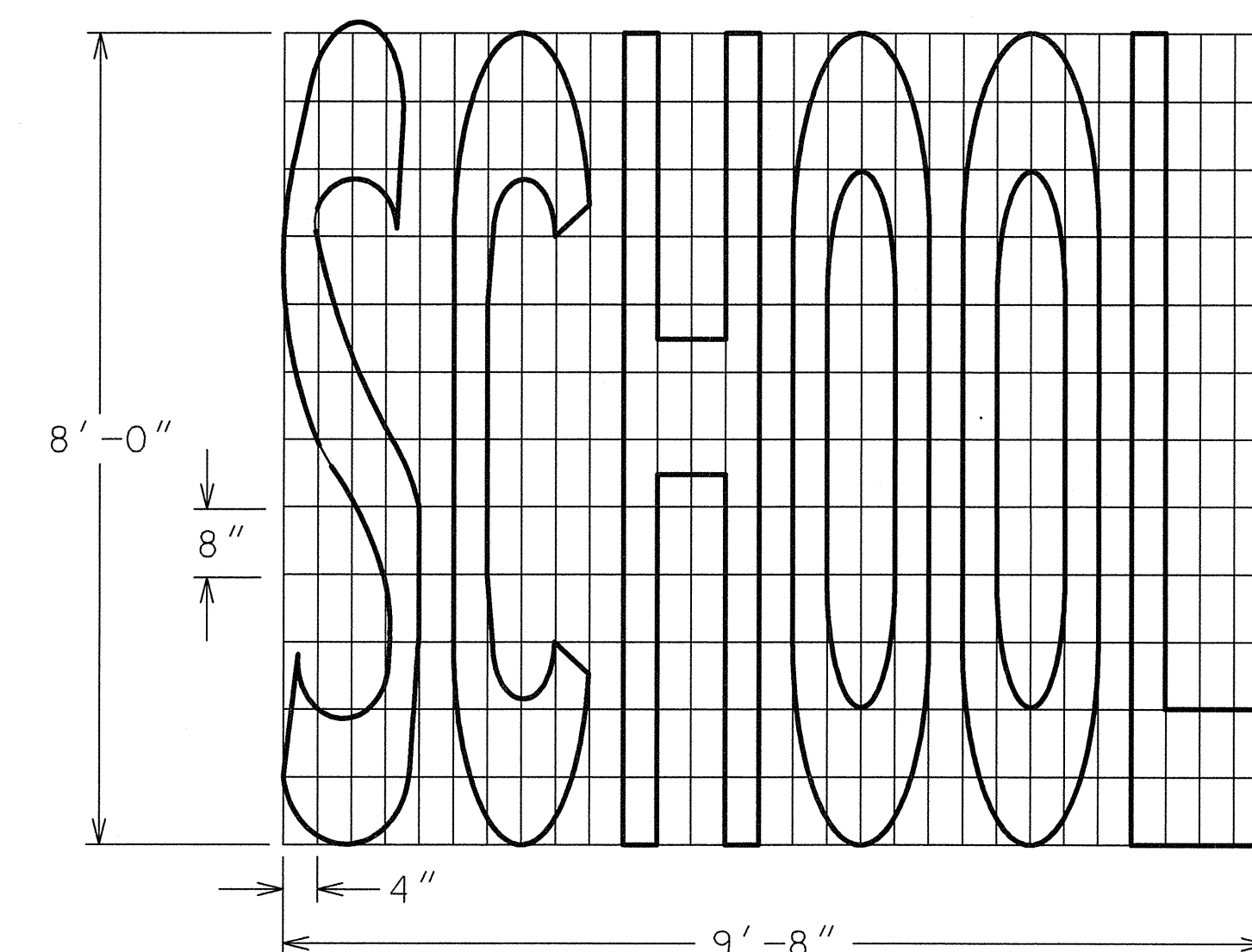
TYPE 1
AREA = 20.8 FT²



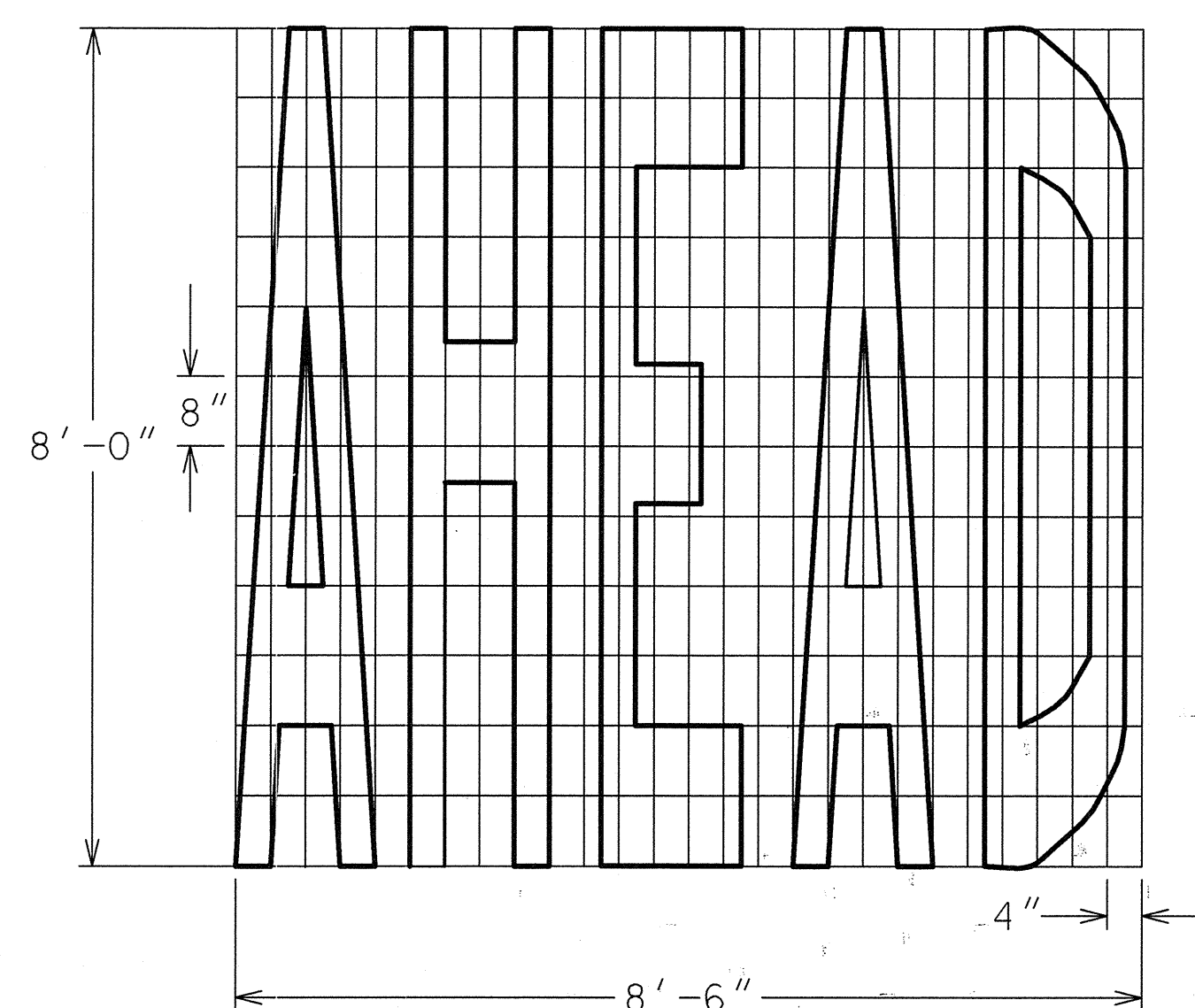
TYPE 2
AREA = 25.4 FT²



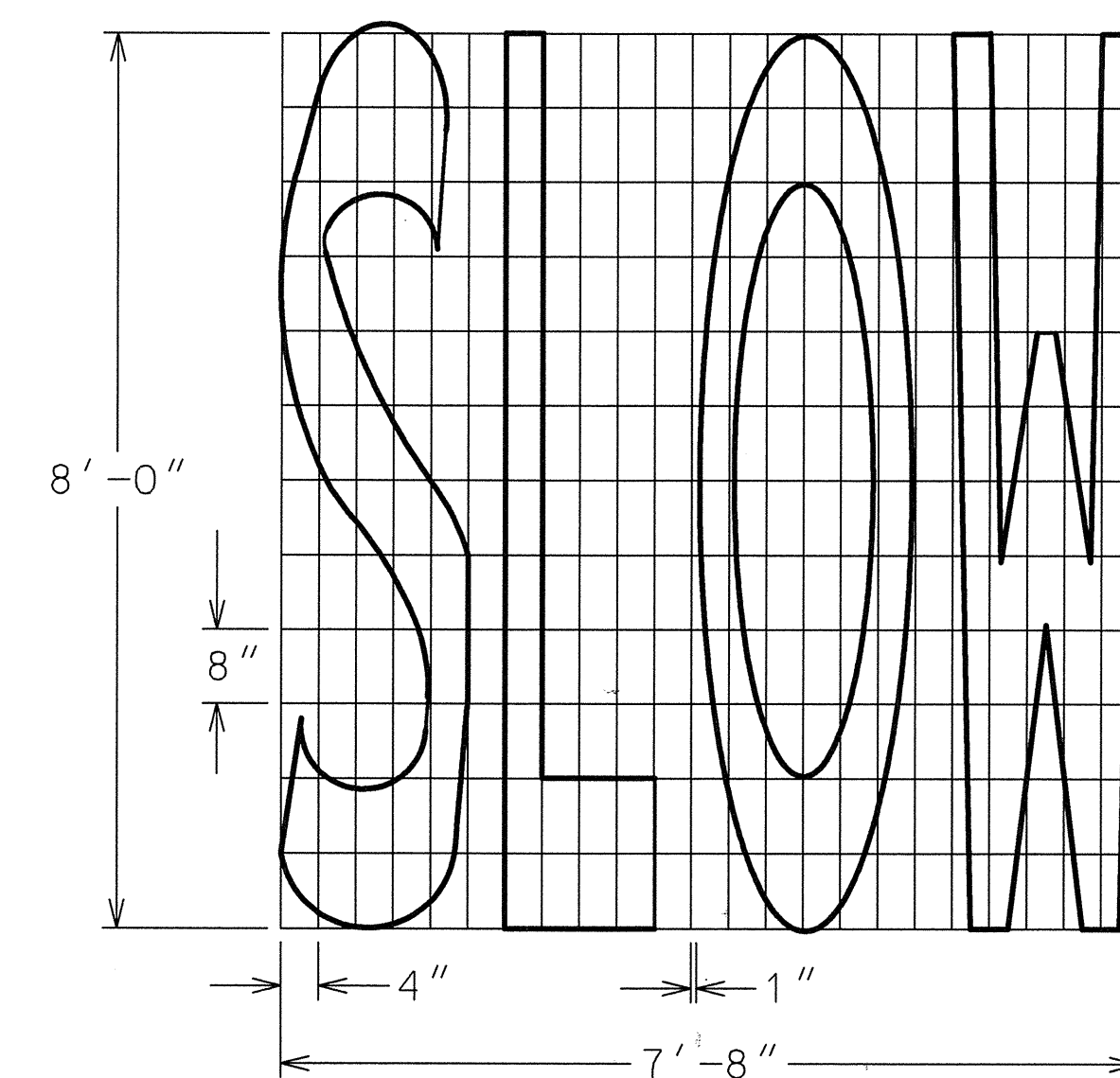
TYPE 15
AREA = 25.4 FT²



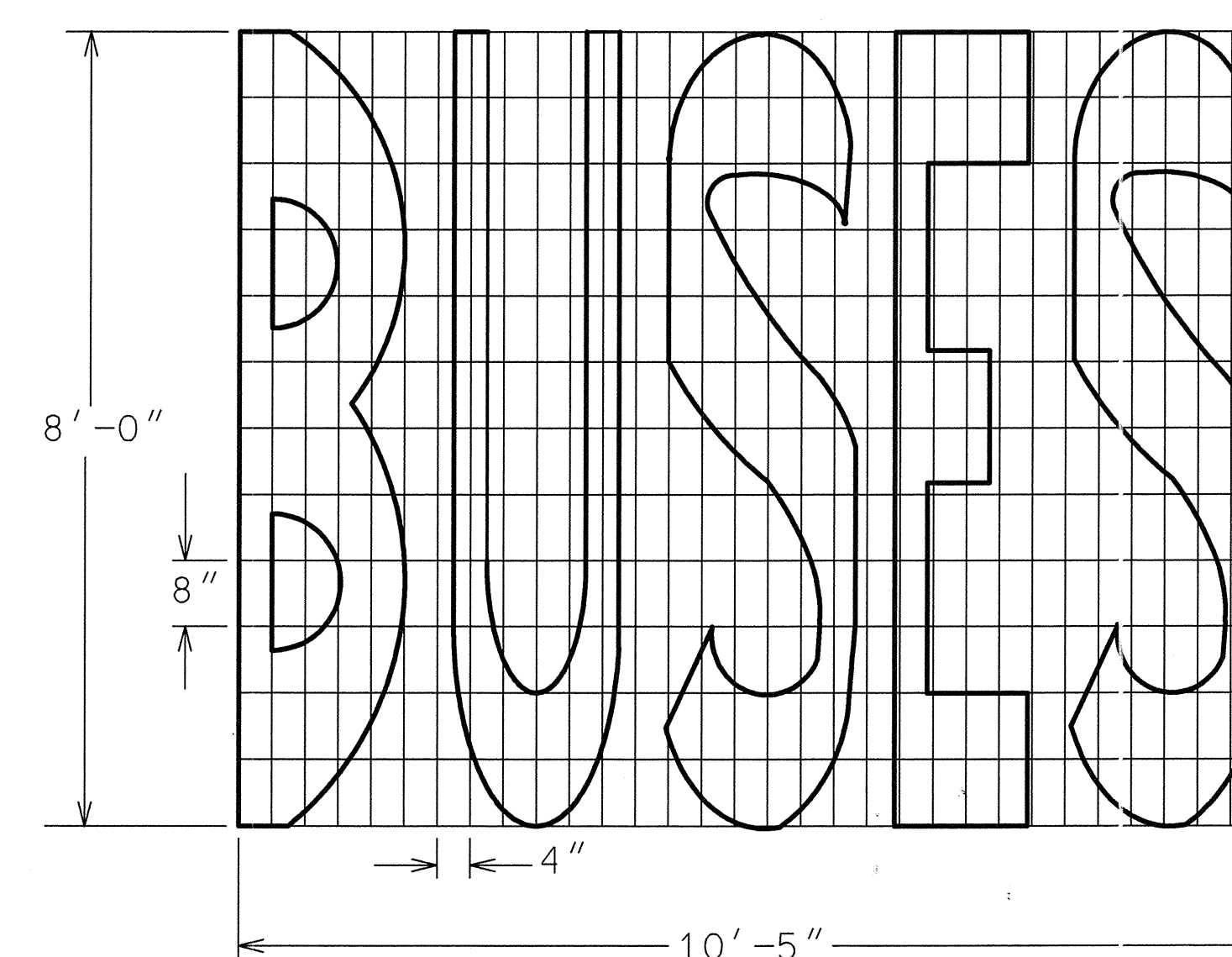
TYPE 3A
(SINGLE LANE)
AREA = 33.5 FT²



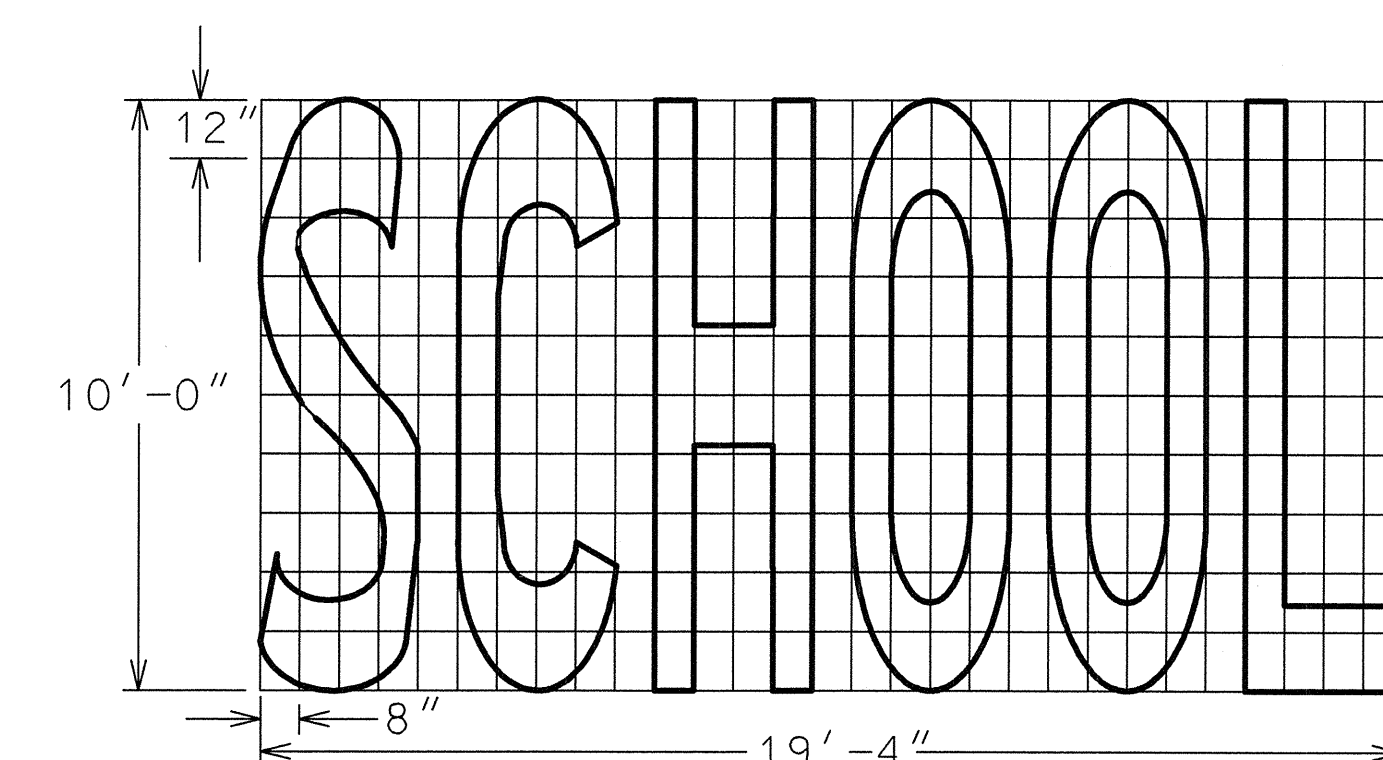
TYPE 4
AREA = 29.1 FT²



TYPE 5
AREA = 25.4 FT²



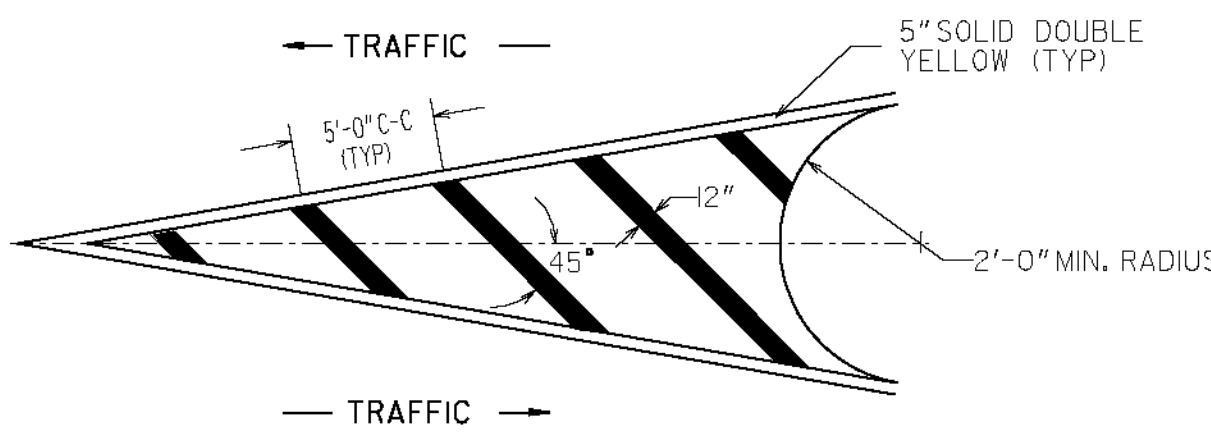
TYPE 6
AREA = 38.1 FT²



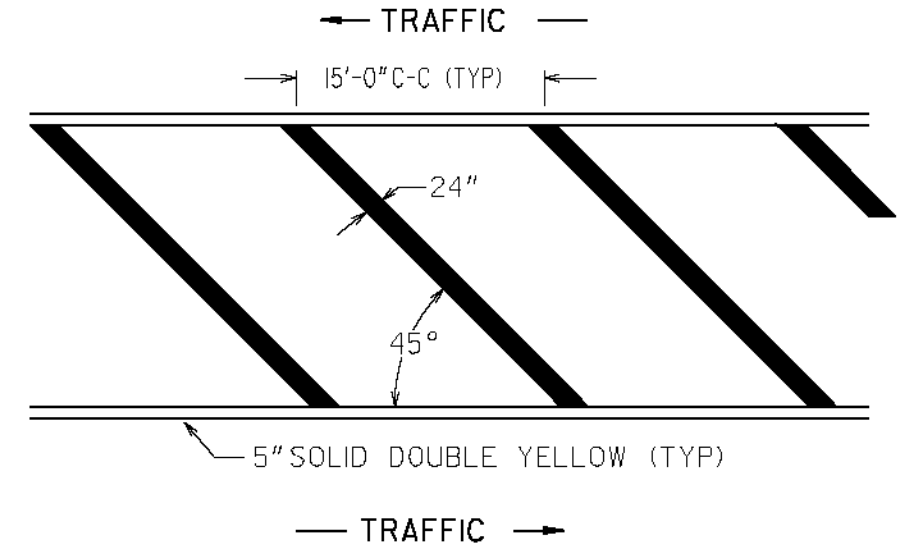
TYPE 3B
(TWO LANES)
AREA = 85.0 FT²

DATE	REVISIONS	GEORGIA DEPARTMENT OF TRANSPORTATION OFFICE OF TRAFFIC SAFETY & DESIGN
		DETAILS OF PAVEMENT MARKING WORDS
		SHEET 1 OF 2
		NO SCALE JANUARY 2000

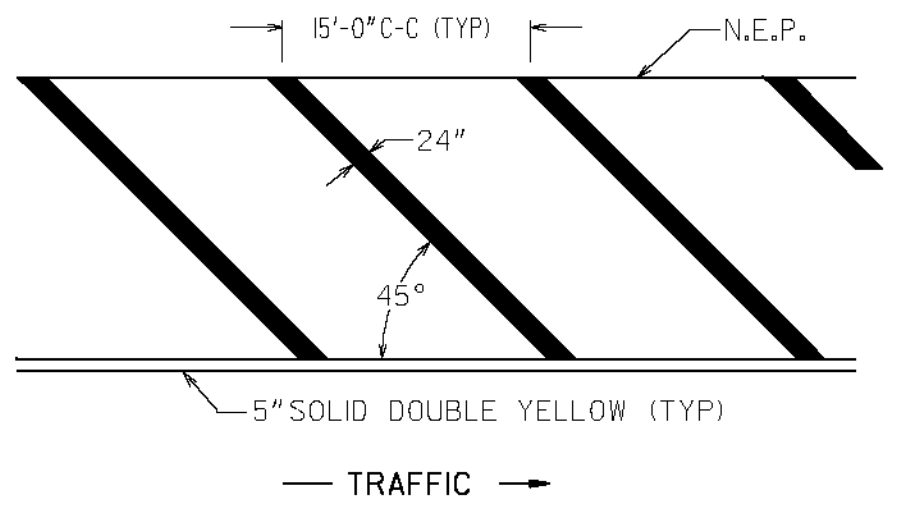
DETAIL "A"(YELLOW)



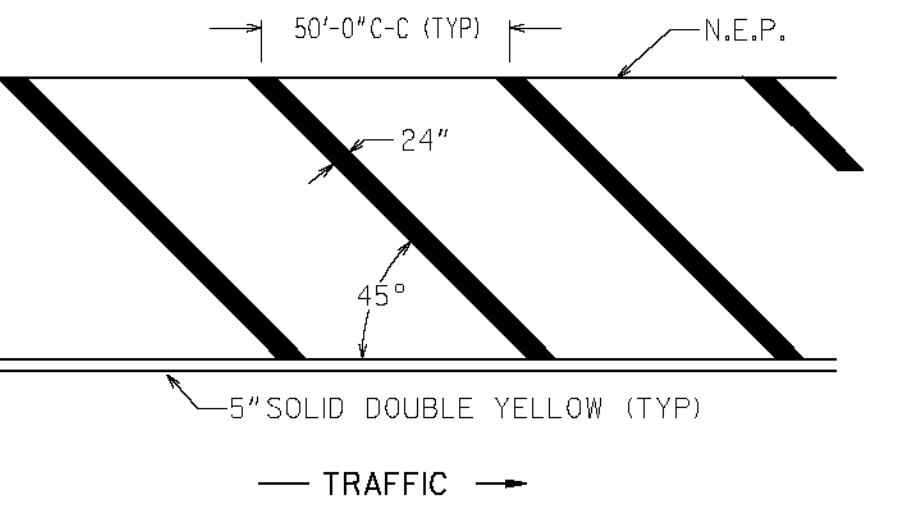
DETAIL "B"(YELLOW)



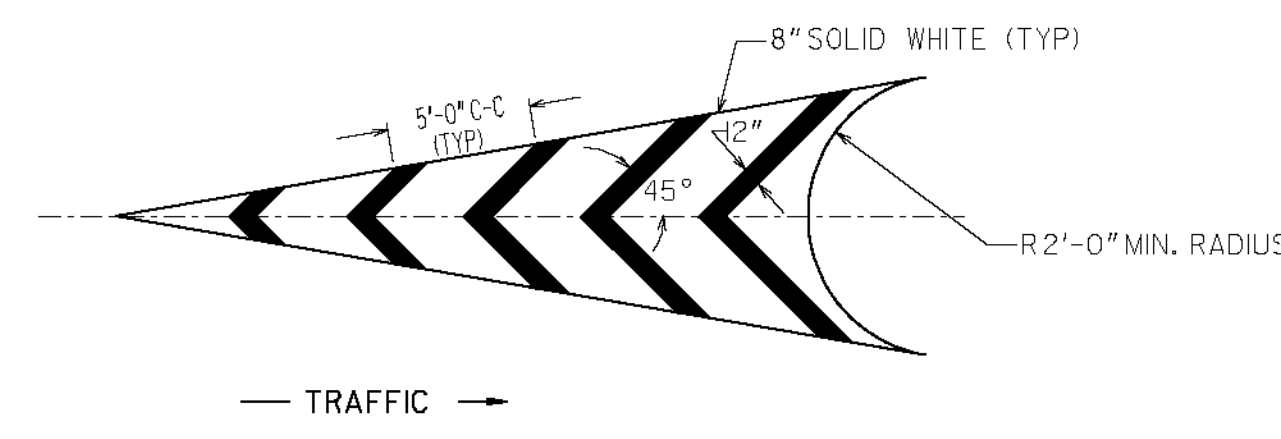
DETAIL "C"(YELLOW)



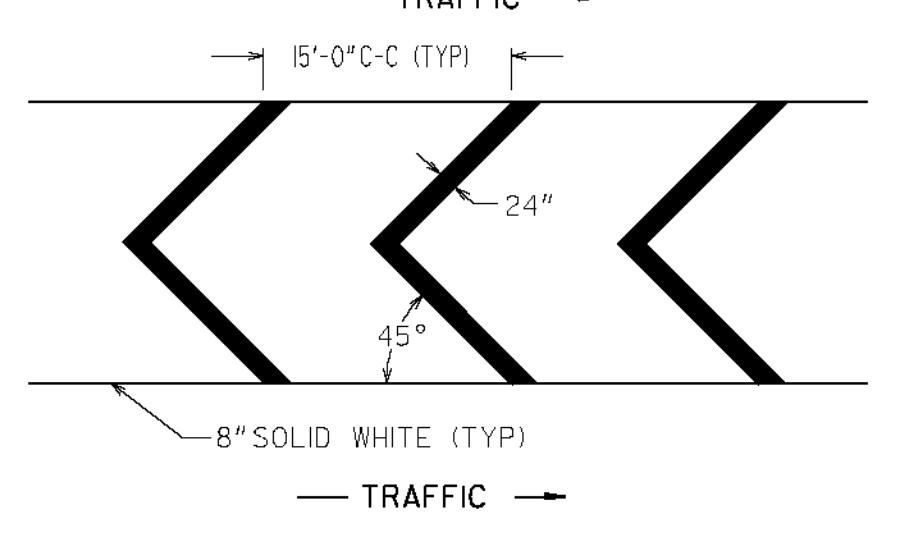
DETAIL "D"(YELLOW)



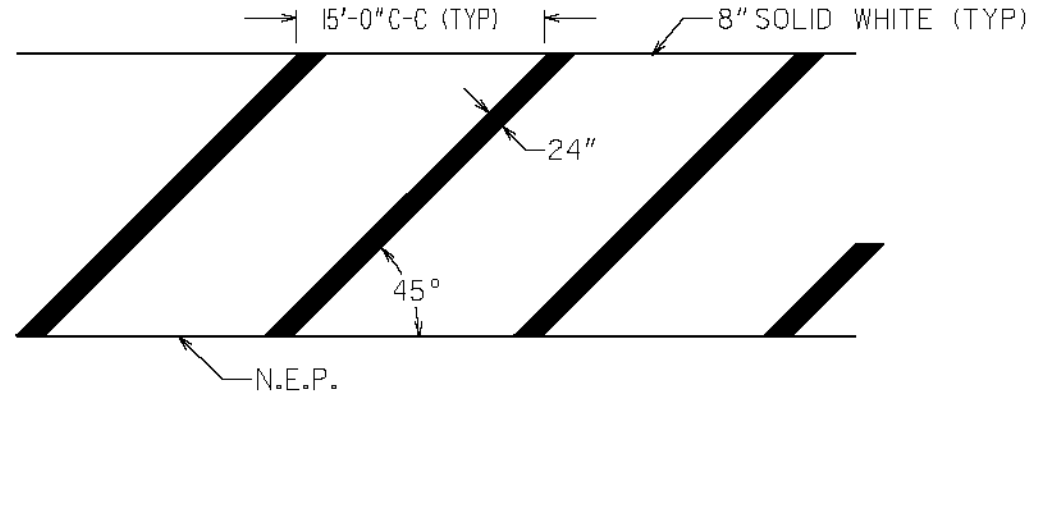
DETAIL "A"(WHITE)



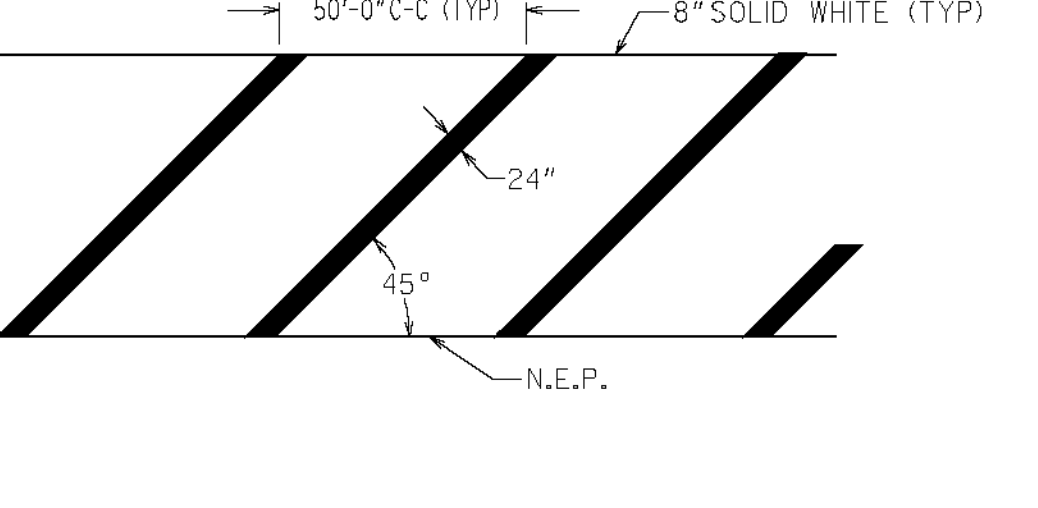
DETAIL "B"(WHITE)



DETAIL "C"(WHITE)



DETAIL "D"(WHITE)

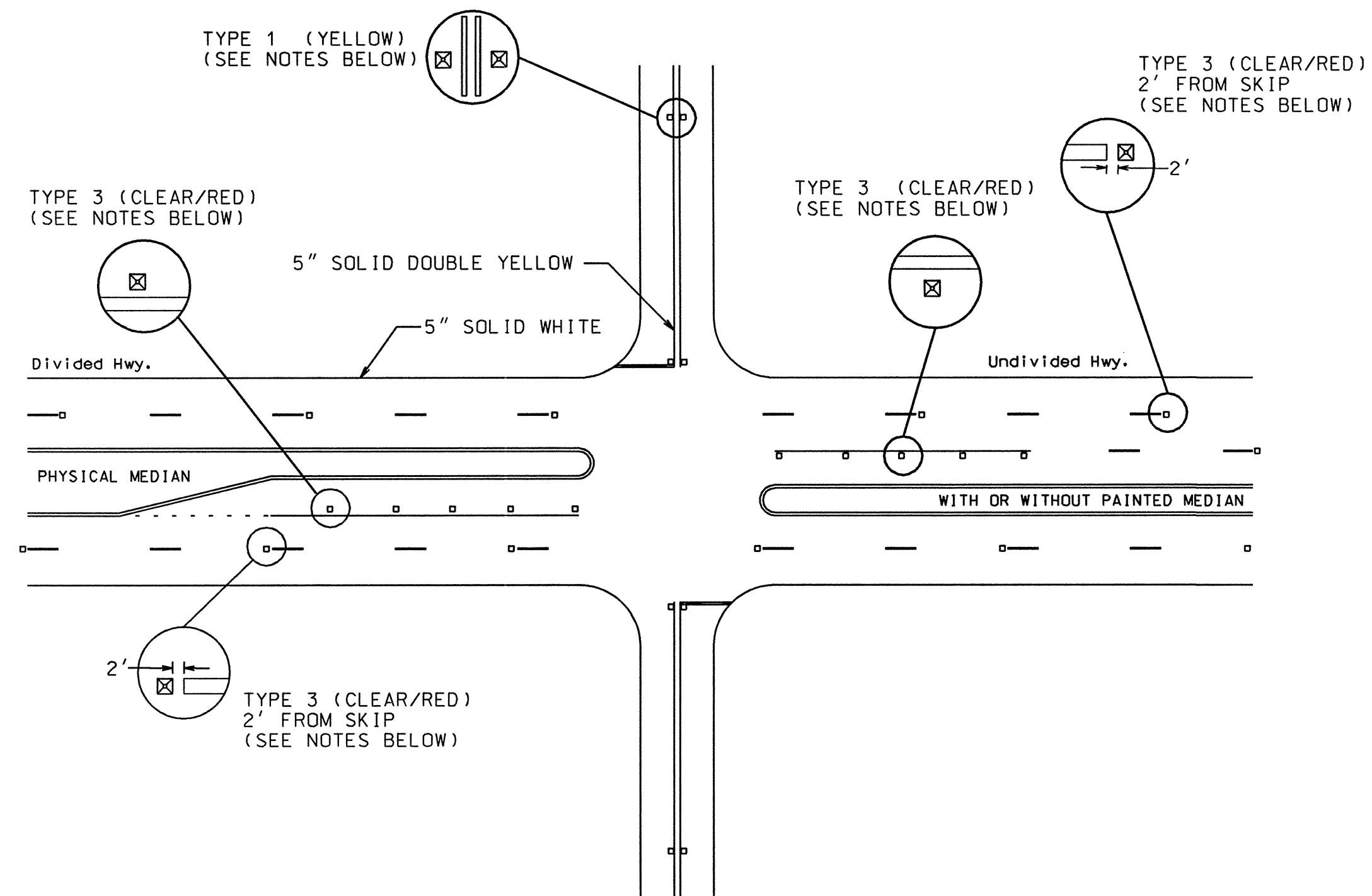


GENERAL NOTES:

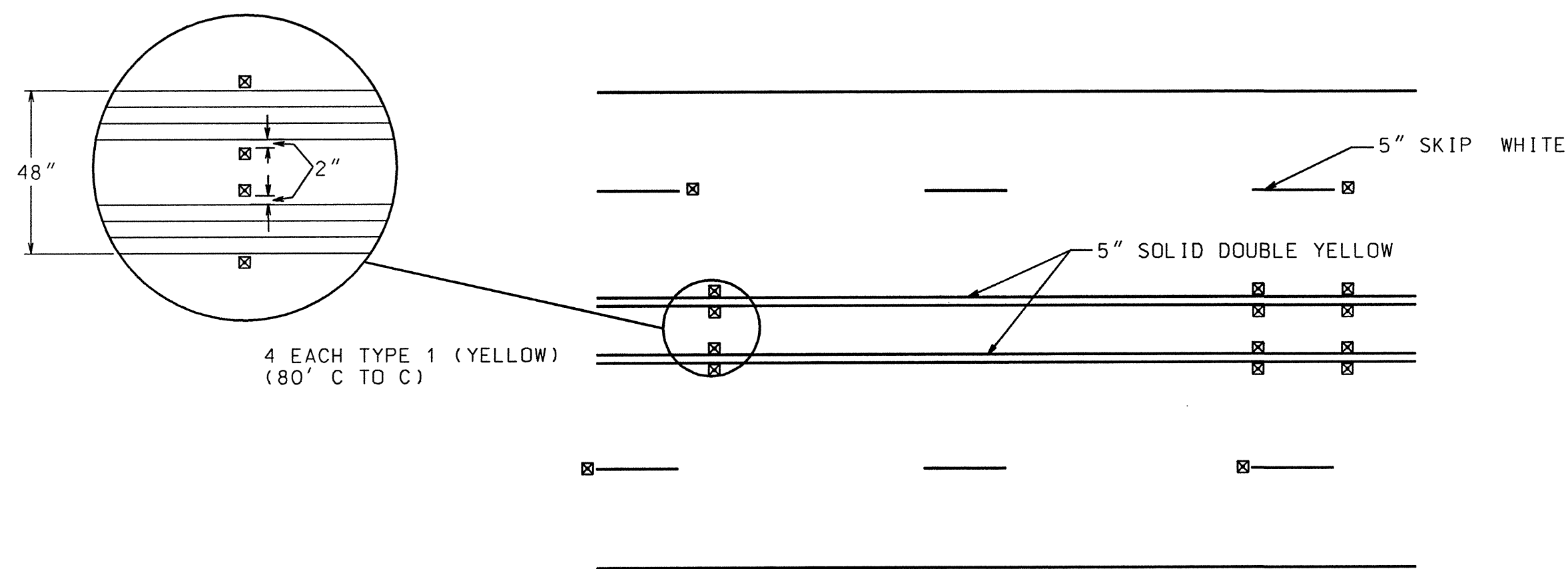
1. FOR YELLOW STRIPING, THE SQUARE YARDS SHOWN ON PLAN, SUMMARY AND DETAILED ESTIMATE SHEETS INCLUDE THE AREA WITHIN THE BORDERS AND THE 5" SOLID DOUBLE YELLOW BORDER.

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.

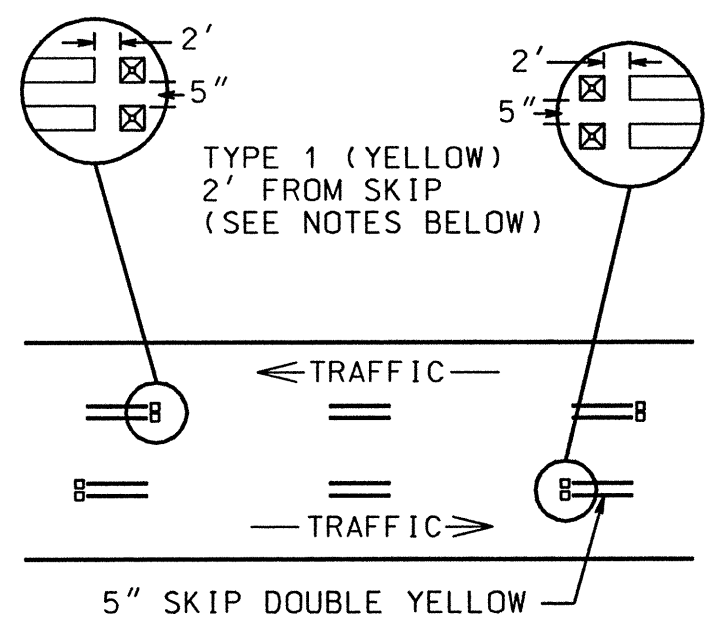
STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.			



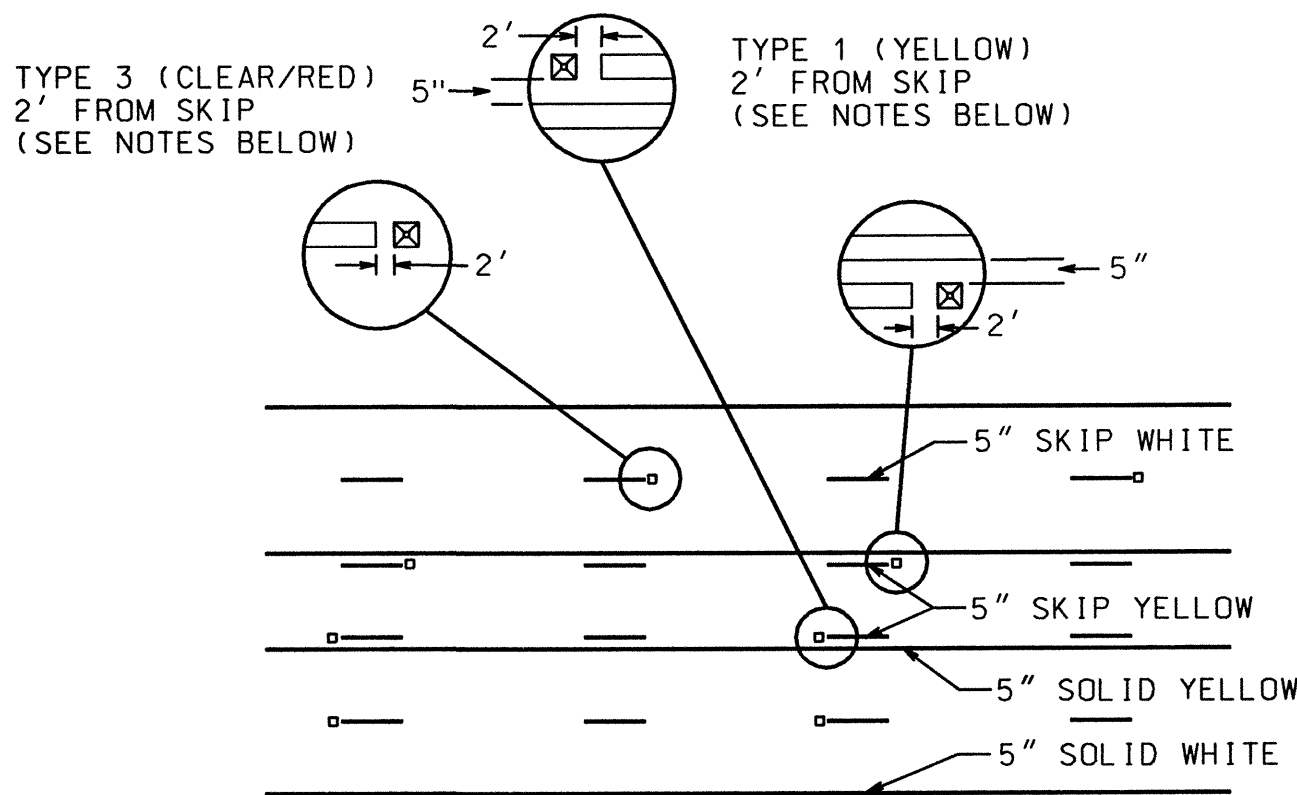
DIVIDED / UNDIVIDED HIGHWAY



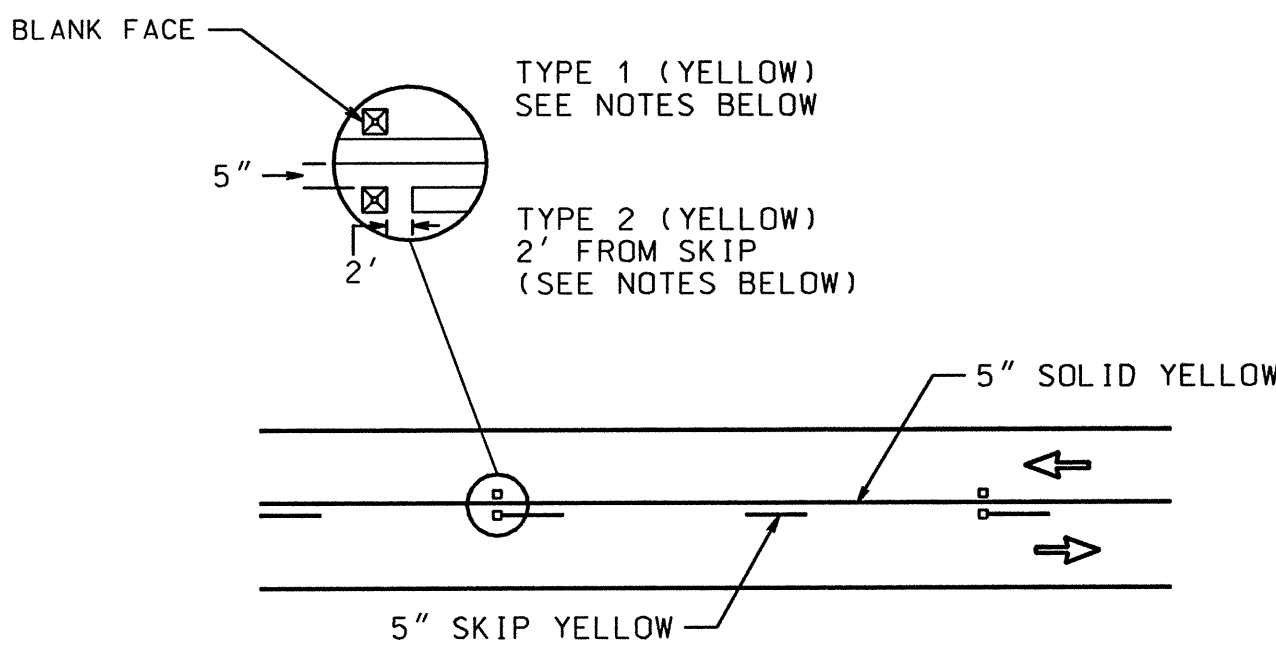
4'-0" STRIPED FLUSH MEDIAN



REVERSIBLE LANE



TWO WAY LEFT TURN LANE



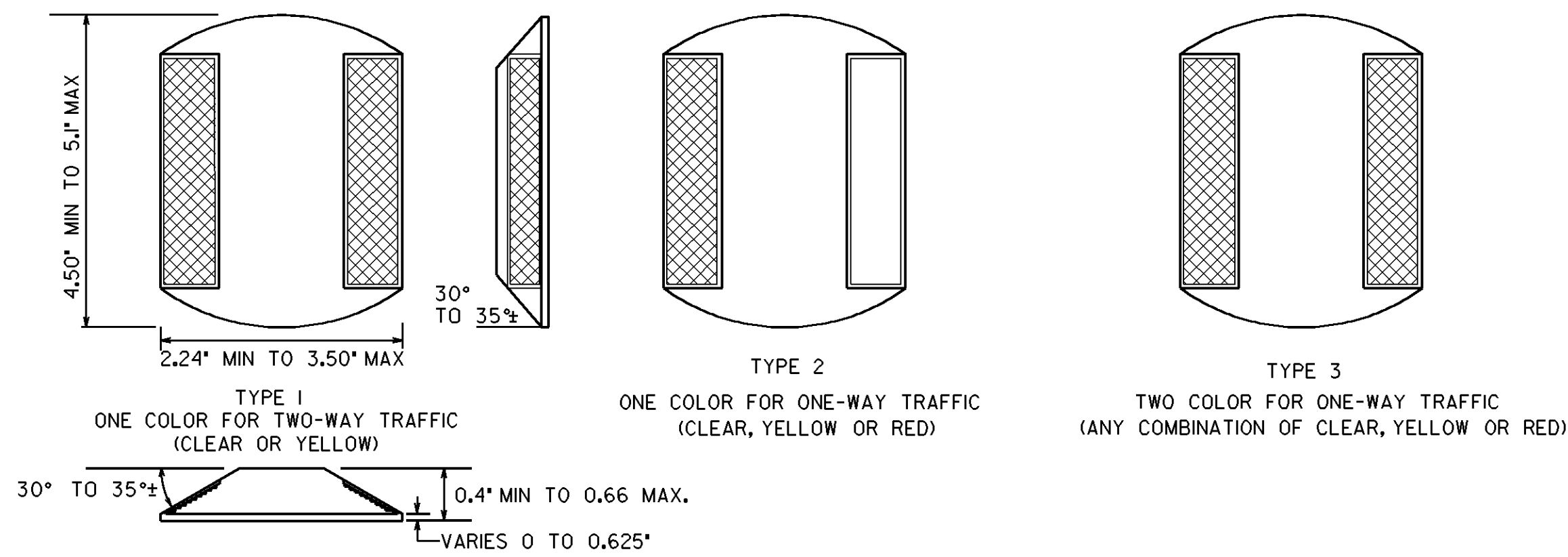
NO PASSING ZONE

- GENERAL NOTES:
1. RAISED PAVEMENT MARKERS SHALL BE SPACED EVERY 80 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.
 5. ON HORIZONTAL CURVES WHERE AT LEAST 3 MARKERS CANNOT BE SEEN AT ONE TIME USING NORMAL SPACING, MARKERS SHALL BE PLACED 40 FT.

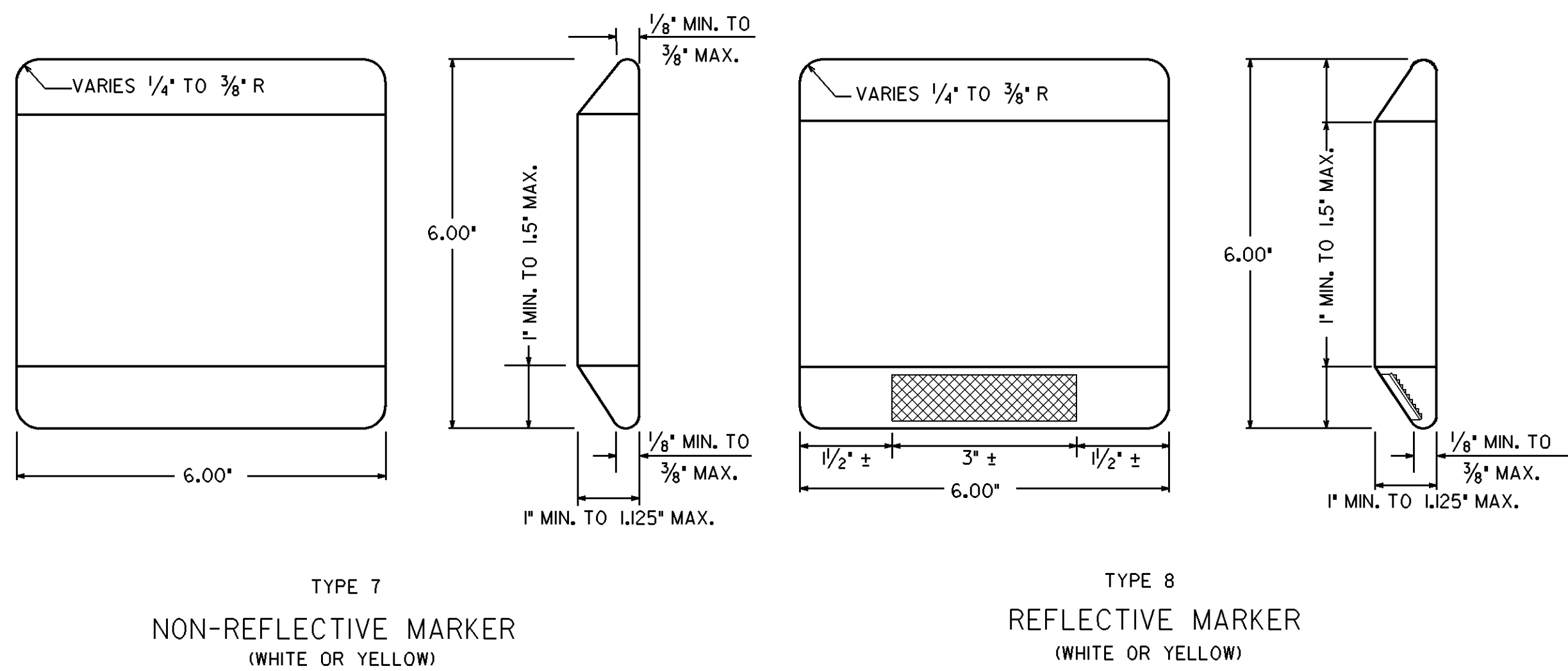
DATE	REVISIONS	GEORGIA DEPARTMENT OF TRANSPORTATION OFFICE OF TRAFFIC SAFETY & DESIGN
9-4-03	NO PASSING ZONE RPM's	
1-13-04	NO PASSING ZONE RPM's	

DETAILS OF RAISED PAVEMENT MARKER LOCATION NON-LIMITED ACCESS ROADWAY NO SCALE JANUARY 2000	
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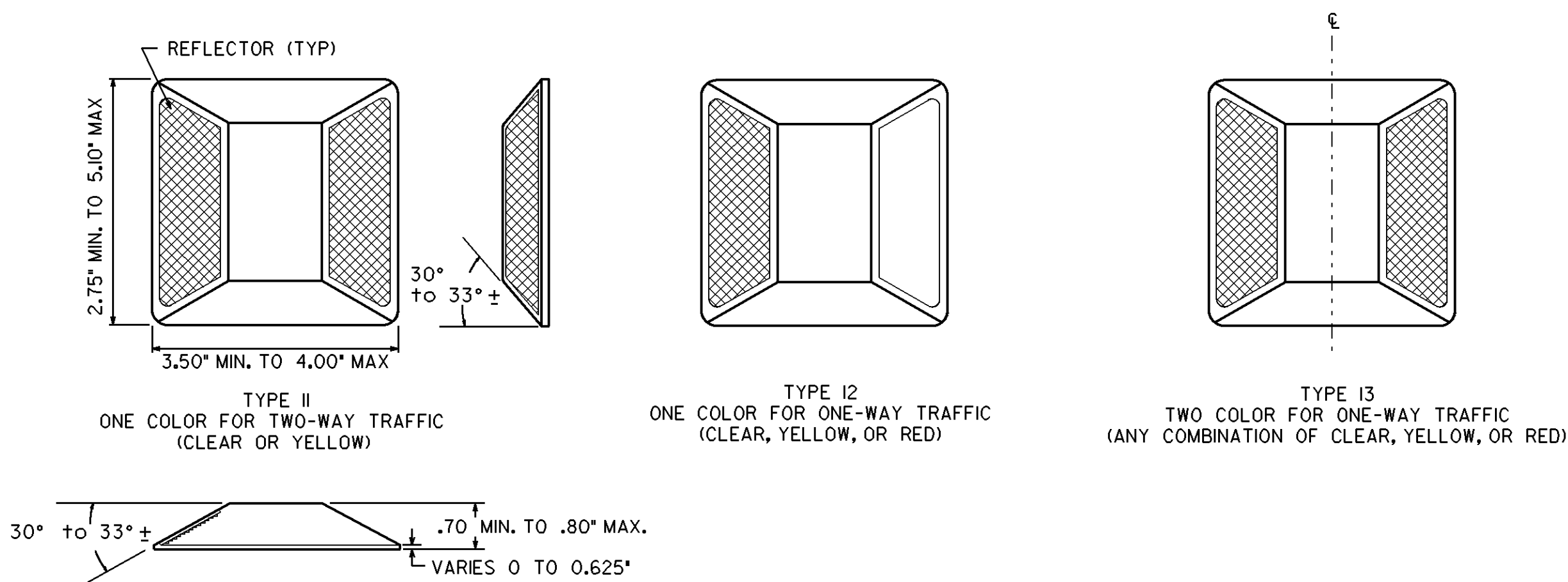
STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.			



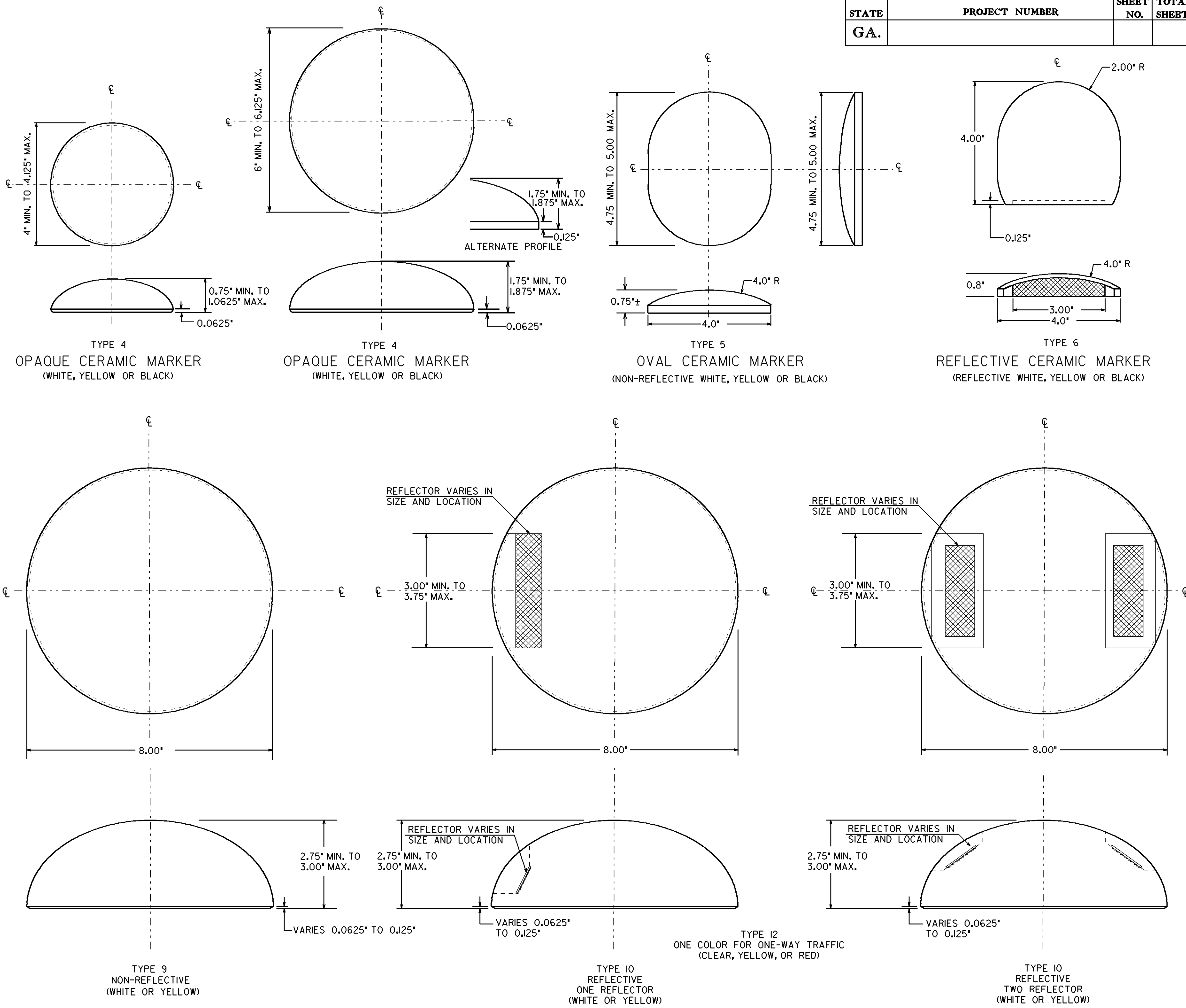
RAISED REFLECTIVE MARKERS



CERAMIC JIGGLE BAR MARKER



ALTERNATE RAISED REFLECTIVE MARKERS



CERAMIC CHANNEL MARKER

GENERAL NOTES:



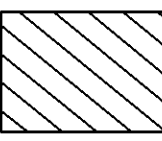
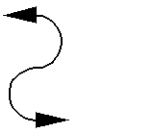

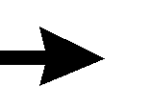
1. SPECIFICATIONS: GEORGIA STANDARD, CURRENT EDITION, AND SUPPLEMENTS THERE TO.
2. THE CONTRACTOR SHALL USE RAISED PAVEMNT MAKER SOURCES AS LISTED IN OPL 76.
3. COLORS FOR REFLECTIVE ELEMENTS SHALL BE EITHER CLEAR, YELLOW, OR RED AS SPECIFIED.
4. THE SHELL OF THE REFLECTIVE MARKERS SHALL BE OF ONE COLOR 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

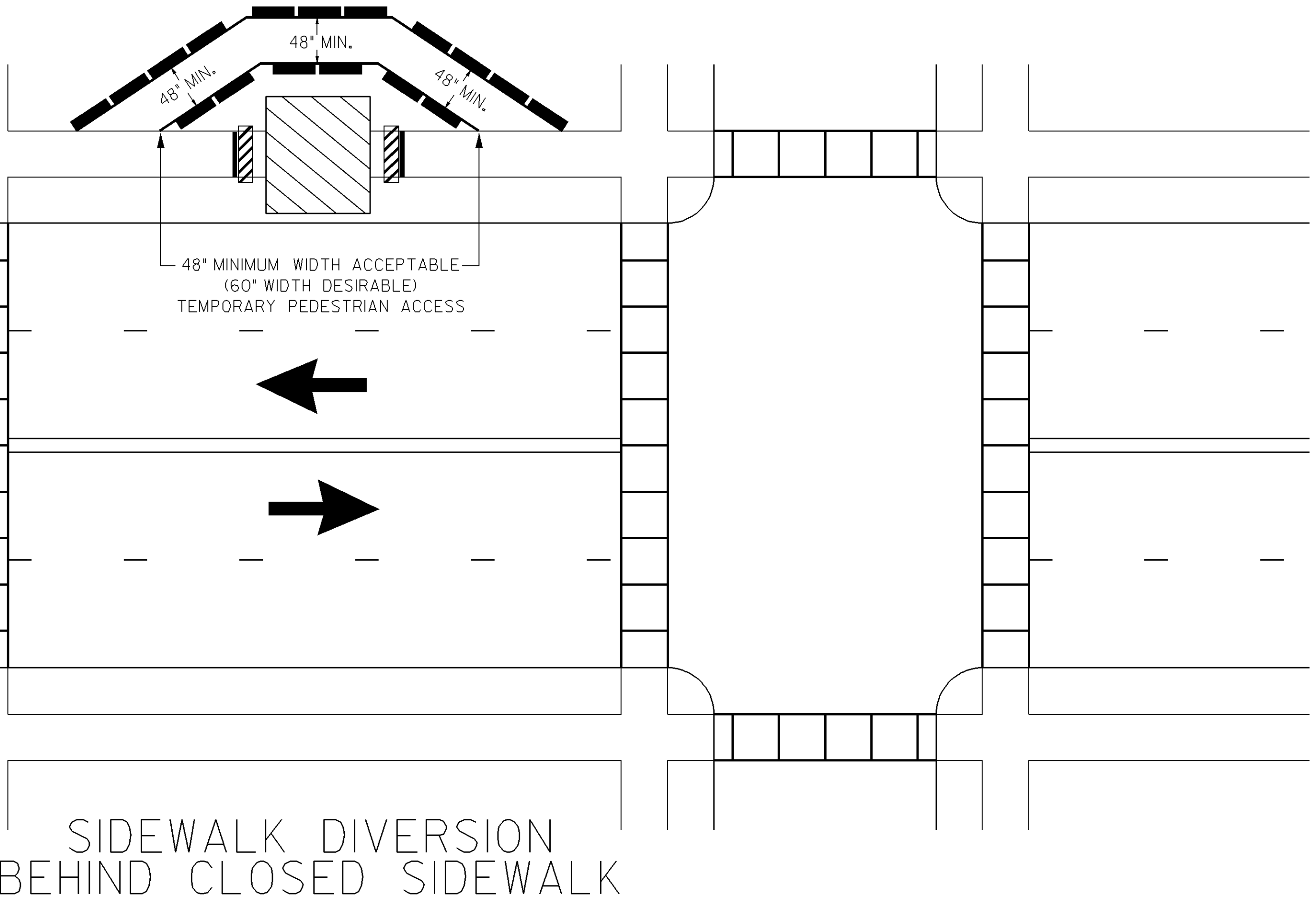
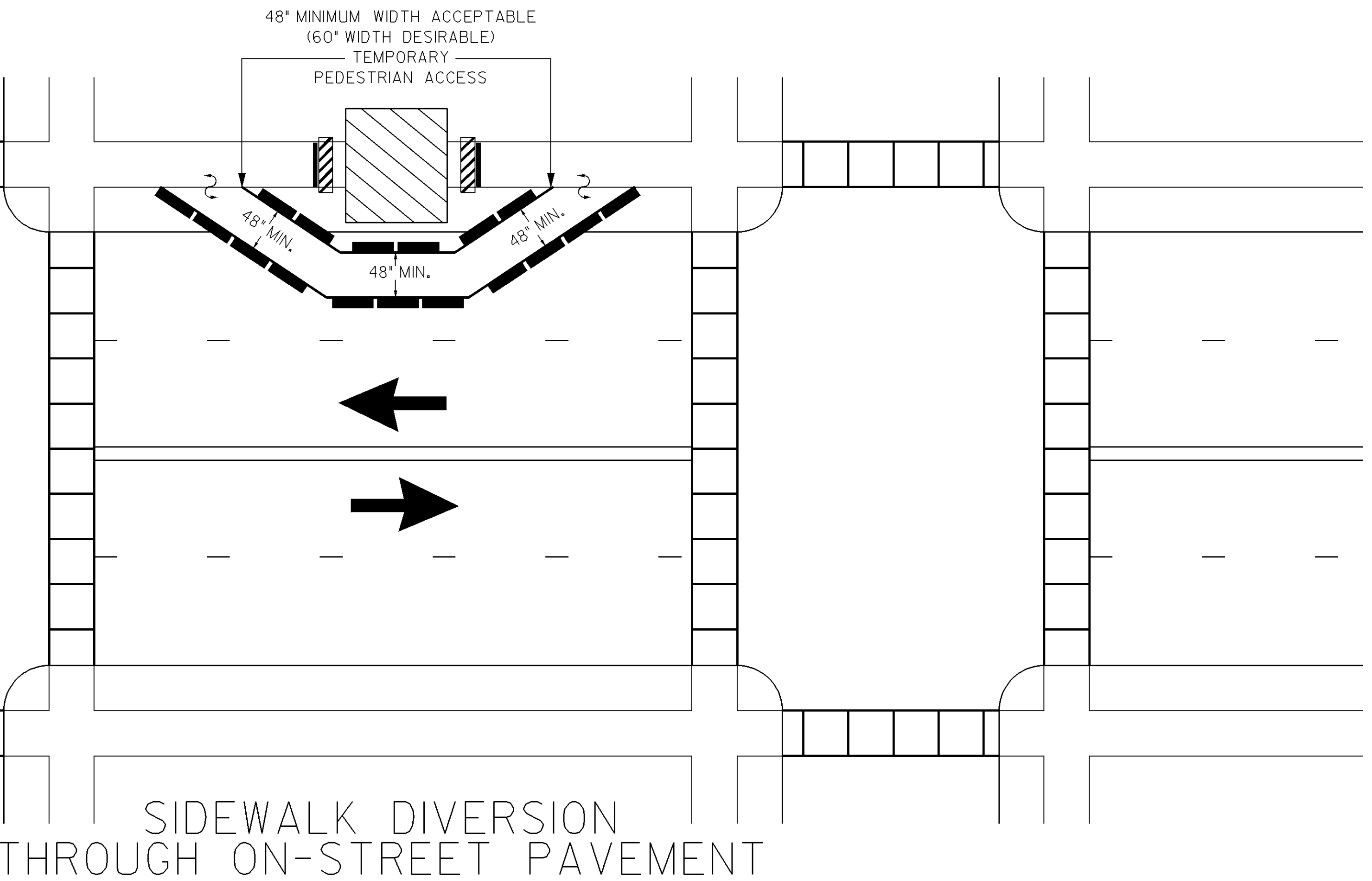
STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.			

GENERAL NOTES:

- CLOSURES OF EXISTING PEDESTRIAN FACILITIES SHALL HAVE PRIOR WRITTEN APPROVAL OF THE ENGINEER.
- ALL TRAFFIC CONTROL DEVICES SHALL BE MADE AND ERECTED IN ACCORDANCE WITH THE DETAILS SHOWN ON THE PLANS, THE MUTCD, THE GEORGIA STANDARD SPECIFICATIONS, AND/OR SPECIAL PROVISIONS. (SEE SECTION 150) DETECTABLE EDGING AND DETECTABLE BARRIERS SHALL BE IN COMPLIANCE WITH THE MUTCD AND ADA REGULATIONS.
- SIGNS AND OTHER DEVICES SHALL BE PLACED SUCH THAT THEY DO NOT NARROW OR RESTRICT ANY PEDESTRIAN PASSAGE TO LESS THAN 48 INCHES (4 FT) IN WIDTH. SIGNS AND OTHER DEVICES MOUNTED LOWER THAN SEVEN (7) FEET ABOVE THE TEMPORARY PEDESTRIAN WALKWAY SHALL NOT PROJECT MORE THAN FOUR (4) INCHES INTO THE ACCESSIBLE PEDESTRIAN FACILITIES.
- NO PAYMENT WILL BE MADE FOR TEMPORARY WALKWAYS WITH DETECTABLE EDGING WHERE EXISTING PAVEMENTS OR EXISTING EDGING (THAT MEETS THE REQUIREMENTS OF MUTCD) ARE UTILIZED FOR THE TEMPORARY WALKWAY. PAYMENT FOR TEMPORARY DETECTABLE EDGING, INCLUDING APPROVED BARRIERS AND CHANNELIZING DEVICES, THAT ARE INSTALLED ON EXISTING PAVEMENTS SHALL BE INCLUDED IN TRAFFIC CONTROL-LUMP SUM.
- REGARDLESS OF THE MATERIALS USED, THE CONTRACTOR SHALL CONSTRUCT TEMPORARY WALKWAYS (WITH DETECTABLE EDGING) OF SUFFICIENT THICKNESS AND DURABILITY TO WITHSTAND THE INTENDED USE FOR THE DURATION OF THE CONSTRUCTION PROJECT (SEE SECTION 150 FOR MINIMUM DESIGN PARAMETERS). THE USE OF COMPACTED SOILS, SANDS, CRUSHED STONE, OR ASPHALTIC PAVEMENT MILLINGS SHALL NOT BE USED AS A SURFACE COURSE FOR TEMPORARY PEDESTRIAN WALKWAYS.
- A 60-INCH MINIMUM WIDTH PEDESTRIAN FACILITY SHOULD BE MAINTAINED WHEN POSSIBLE. WHEN A 60-INCH MINIMUM WIDTH CANNOT BE ACHIEVED, A MINIMUM WIDTH OF 48 INCHES SHALL BE PROVIDED WITH PASSING ZONES (60 INCHES BY 60 INCHES) AT LEAST EVERY 200 FEET.
- TEMPORARY AUDIBLE INFORMATION DEVICES SHOULD BE USED WHERE MIDBLOCK CLOSINGS AND CHANGED CROSSWALK AREAS CAUSE INADEQUATE COMMUNICATION TO BE PROVIDED TO PEDESTRIANS WHO HAVE VISUAL DISABILITIES.
- WHEN CURB CUT RAMP IS NOT PRESENT, TEMPORARY OR PERMANENT CURB CUT RAMP WILL BE PROVIDED BY CONTRACTOR.

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



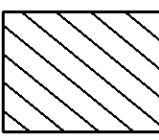



		10-16-08	DATE	DEPARTMENT OF TRANSPORTATION	
				STATE OF GEORGIA	
				CONSTRUCTION DETAIL	
				TRAFFIC CONTROL	
				PEDESTRIAN ACCESSIBILITY	
				AROUND WORKZONE -	
				SIDEWALK DIVERSION	
				NO SCALE	SEPTEMBER 2008
		GLO	BY	T-20	



STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.			

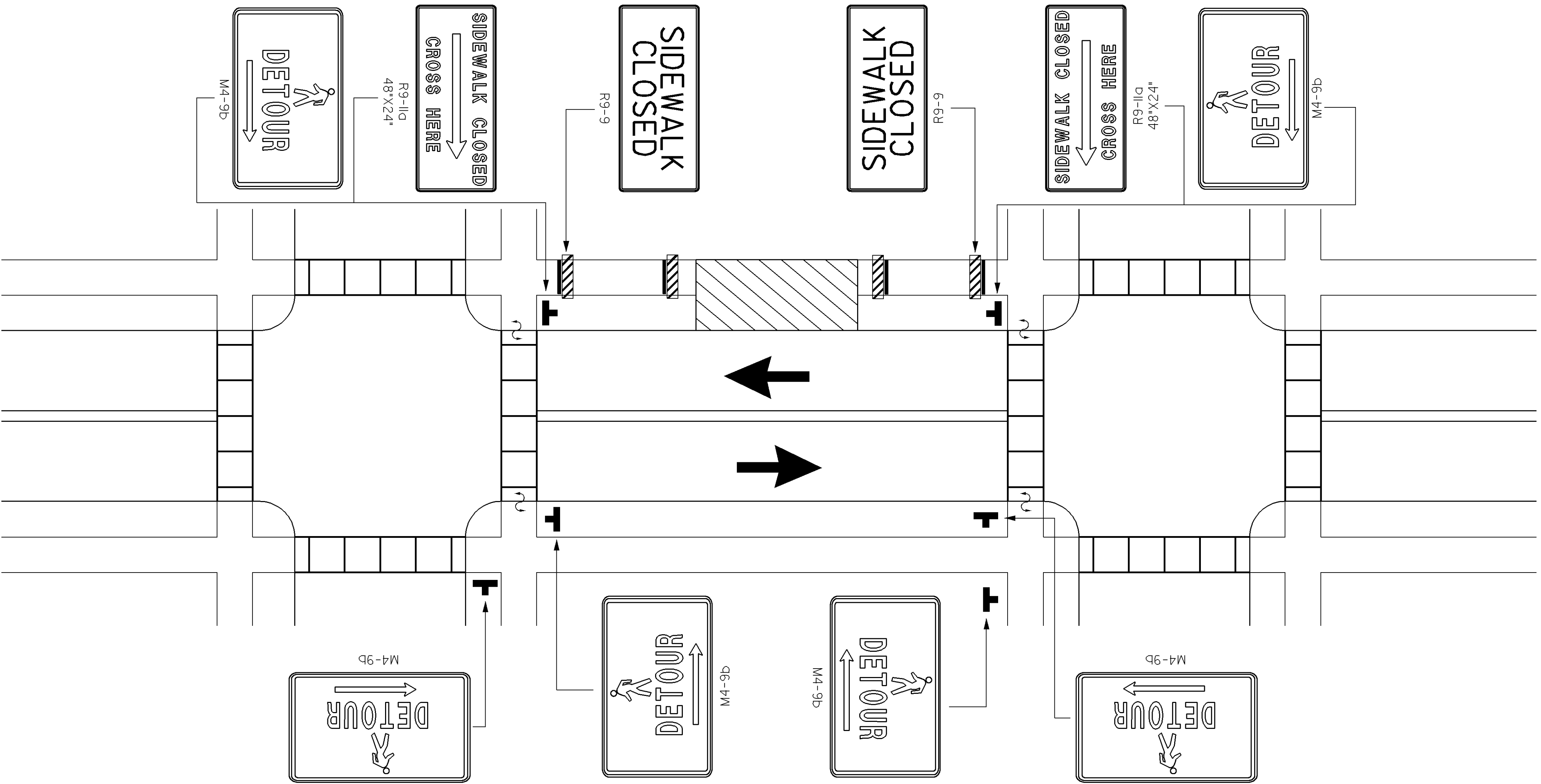
GENERAL NOTES:

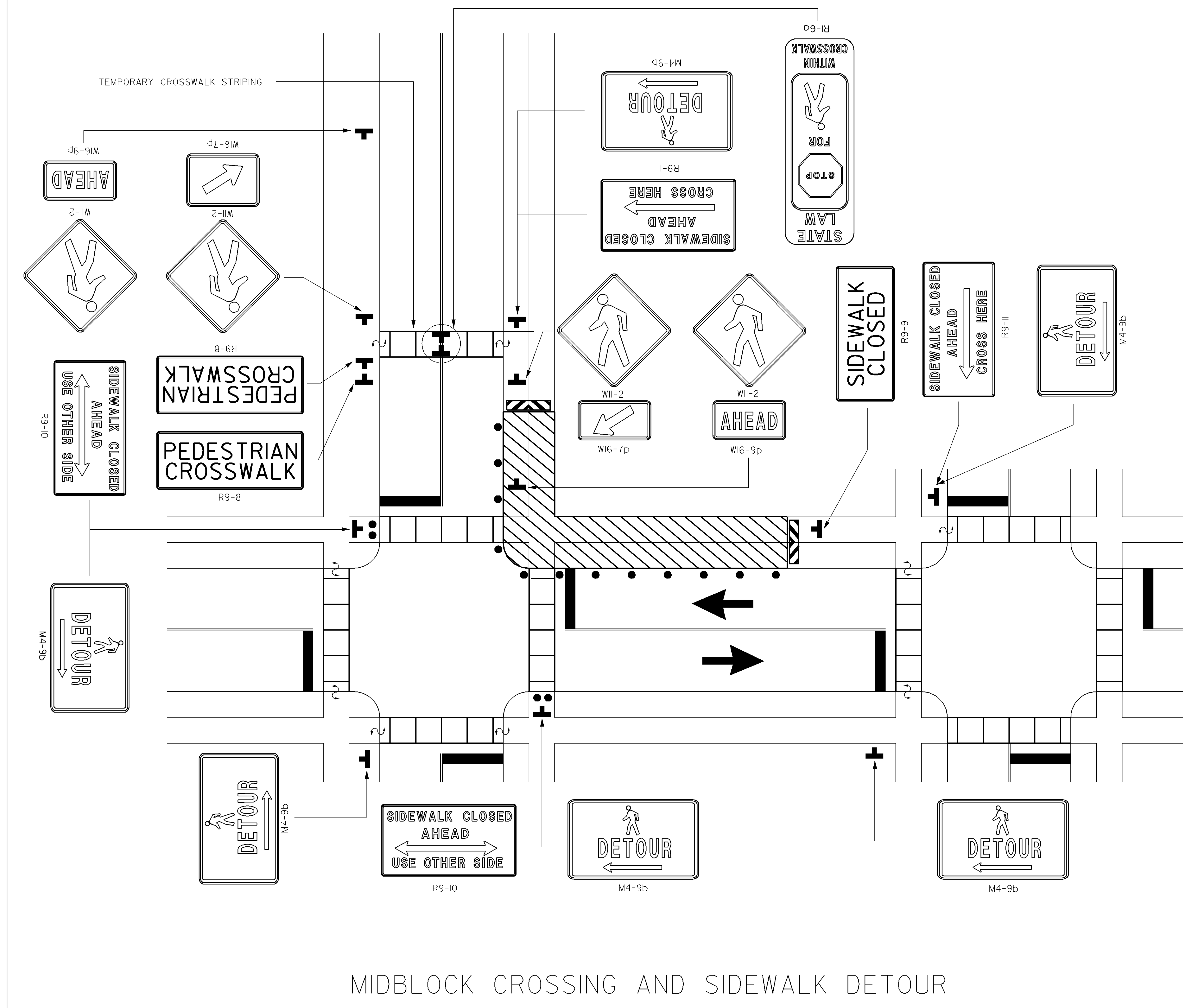
- CLOSURES OF EXISTING PEDESTRIAN FACILITIES SHALL HAVE PRIOR WRITTEN APPROVAL OF THE ENGINEER.
- ALL TRAFFIC CONTROL DEVICES SHALL BE MADE AND ERECTED IN ACCORDANCE WITH THE DETAILS SHOWN ON THE PLANS, THE MUTCD, THE GEORGIA STANDARD SPECIFICATIONS, AND/OR SPECIAL PROVISIONS. (SEE SECTION 150) DETECTABLE EDGING AND DETECTABLE BARRIERS SHALL BE IN COMPLIANCE WITH THE MUTCD AND ADA REGULATIONS.
- SIGNS AND OTHER DEVICES SHALL BE PLACED SUCH THAT THEY DO NOT NARROW OR RESTRICT ANY PEDESTRIAN PASSAGE TO LESS THAN 48 INCHES (4 FT) IN WIDTH. SIGNS AND OTHER DEVICES MOUNTED LOWER THAN SEVEN (7) FEET ABOVE THE TEMPORARY PEDESTRIAN WALKWAY SHALL NOT PROJECT MORE THAN FOUR (4) INCHES INTO THE ACCESSIBLE PEDESTRIAN FACILITIES.
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- REGARDLESS OF THE MATERIALS USED, THE CONTRACTOR SHALL CONSTRUCT TEMPORARY WALKWAYS (WITH DETECTABLE EDGING) OF SUFFICIENT THICKNESS AND DURABILITY TO WITHSTAND THE INTENDED USE FOR THE DURATION OF THE CONSTRUCTION PROJECT (SEE SECTION 150 FOR MINIMUM DESIGN PARAMETERS). THE USE OF COMPACTED SOILS, SANDS, CRUSHED STONE, OR ASPHALTIC PAVEMENT MILLINGS SHALL NOT BE USED AS A SURFACE COURSE FOR TEMPORARY PEDESTRIAN WALKWAYS.
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- TEMPORARY AUDIBLE INFORMATION DEVICES SHOULD BE USED WHERE MIDBLOCK CLOSINGS AND CHANGED CROSSWALK AREAS CAUSE INADEQUATE COMMUNICATION TO BE PROVIDED TO PEDESTRIANS WHO HAVE VISUAL DISABILITIES.
- WHEN CURB CUT RAMP IS NOT PRESENT, TEMPORARY OR PERMANENT CURB CUT RAMP WILL BE PROVIDED BY CONTRACTOR.

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

		10-16-08	DATE	DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA	
		REVISED TITLE BLOCK	REVISION	CONSTRUCTION DETAIL TRAFFIC CONTROL PEDESTRIAN ACCESSIBILITY AROUND WORKZONE - SIDEWALK DETOUR	
		GLO	BY	NO SCALE	SEPTEMBER 2008
					T-21

SIDEWALK DETOUR












GENERAL NOTES:

1. CLOSURES OF EXISTING PEDESTRIAN FACILITIES SHALL HAVE PRIOR WRITTEN APPROVAL OF THE ENGINEER.
2. ALL TRAFFIC CONTROL DEVICES SHALL BE MADE AND ERECTED IN ACCORDANCE WITH THE DETAILS SHOWN ON THE PLANS, THE MUTCD, THE GEORGIA STANDARD SPECIFICATIONS, AND/OR SPECIAL PROVISIONS. (SEE SECTION 150) DETECTABLE EDGING AND DETECTABLE BARRIERS SHALL BE IN COMPLIANCE WITH THE MUTCD AND ADA REGULATIONS.
3. SIGNS AND OTHER DEVICES SHALL BE PLACED SUCH THAT THEY DO NOT NARROW OR RESTRICT ANY PEDESTRIAN PASSAGE TO LESS THAN 48 INCHES (4 FT) IN WIDTH. SIGNS AND OTHER DEVICES MOUNTED LOWER THAN SEVEN (7) FEET ABOVE THE TEMPORARY PEDESTRIAN WALKWAY SHALL NOT PROJECT MORE THAN FOUR (4) INCHES INTO THE ACCESSIBLE PEDESTRIAN FACILITIES.
4. NO PAYMENT WILL BE MADE FOR TEMPORARY WALKWAYS WITH DETECTABLE EDGING WHERE EXISTING PAVEMENTS OR EXISTING EDGING (THAT MEETS THE REQUIREMENTS OF MUTCD) ARE UTILIZED FOR THE TEMPORARY WALKWAY. PAYMENT FOR TEMPORARY DETECTABLE EDGING, INCLUDING APPROVED BARRIERS AND CHANNELIZING DEVICES, THAT ARE INSTALLED ON EXISTING PAVEMENTS SHALL BE INCLUDED IN TRAFFIC CONTROL-LUMP SUM.
5. REGARDLESS OF THE MATERIALS USED, THE CONTRACTOR SHALL CONSTRUCT TEMPORARY WALKWAYS (WITH DETECTABLE EDGING) OF SUFFICIENT THICKNESS AND DURABILITY TO WITHSTAND THE INTENDED USE FOR THE DURATION OF THE CONSTRUCTION PROJECT (SEE SECTION 150 FOR MINIMUM DESIGN PARAMETERS). THE USE OF COMPACTED SOILS, SANDS, CRUSHED STONE, OR ASPHALTIC PAVEMENT MILLINGS SHALL NOT BE USED AS A SURFACE COURSE FOR TEMPORARY PEDESTRIAN WALKWAYS.
6. A 60-INCH MINIMUM WIDTH PEDESTRIAN FACILITY SHOULD BE MAINTAINED WHEN POSSIBLE. WHEN A 60-INCH MINIMUM WIDTH CANNOT BE ACHIEVED, A MINIMUM WIDTH OF 48 INCHES SHALL BE PROVIDED WITH PASSING ZONES (60 INCHES BY 60 INCHES) AT LEAST EVERY 200 FEET.
7. TEMPORARY AUDIBLE INFORMATION DEVICES SHOULD BE USED WHERE MIDBLOCK CLOSINGS AND CHANGED CROSSWALK AREAS CAUSE INADEQUATE COMMUNICATION TO BE PROVIDED TO PEDESTRIANS WHO HAVE VISUAL DISABILITIES.
8. CURB PARKING SHALL BE PROHIBITED FOR AT LEAST 50 FEET IN ADVANCE OF THE MIDBLOCK CROSSWALK.
9. PLACEMENT AND REMOVAL OF TEMPORARY CROSSWALK STRIPING SHALL BE INCLUDED IN LUMP SUM TRAFFIC CONTROL.
10. WHEN CURB CUT RAMP IS NOT PRESENT, TEMPORARY OR PERMANENT CURB CUT RAMP WILL BE PROVIDED BY CONTRACTOR.

STANDARD LEGEND

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

			10-16-08	DATE	DEPARTMENT OF TRANSPORTATION	
					STATE OF GEORGIA	
			REVISED TITLE BLOCK	REVISION	CONSTRUCTION DETAIL TRAFFIC CONTROL PEDESTRIAN ACCESSIBILITY AROUND WORKZONE - MIDBLOCK CROSSING AND SIDEWALK DETOUR	
					NO SCALE	SEPTEMBER 2008
			GLO BY			T-22

USING STRANDED COPPER WIRE

TRAFFIC FLOW →

LANE STRIPE

DETAIL *D*

6' x 6' LOOP (TYP)

DETAIL *G*

DETAIL *A*

NOTE:
ALL 14 AWG COPPER WIRE
MUST BE FULLY ENCASED
IN SEALANT.

TRAFFIC FLOW →

ROAD EDGE

DETAIL *D*

DETAIL *G*

DETAIL *B*

LEAD-IN WIRE

NOTE:
ALL DETECTOR LOOPS
SHALL BE WOUND IN
OPPOSITE DIRECTIONS.

WILL REQUIRE AN ADDITIONAL
SANCUT IF USING 2 AMPLIFIERS
(MIN. 6" SEPARATION).

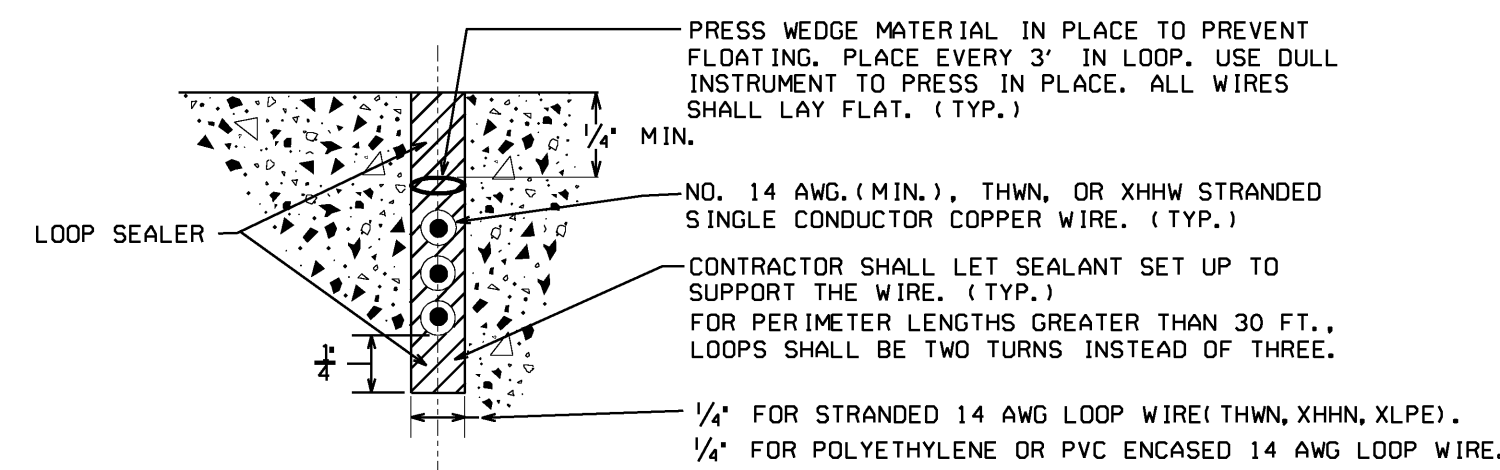
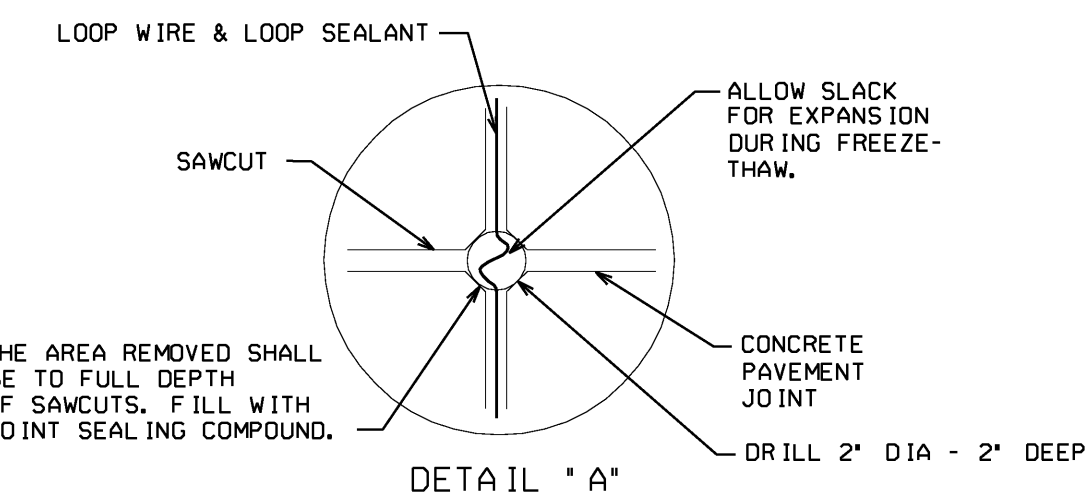
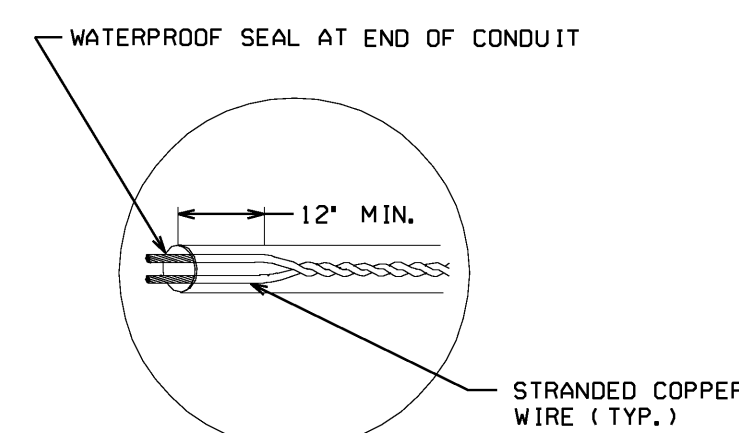


Diagram illustrating the installation of a loop sealer in a trench. The sealer is shown as a vertical assembly with a central pipe and a loop at the bottom. Dimensions include a 3' MIN. height for the upper section and a 1/4' height for the lower section. Arrows point to 'LOOP SEALER' and 'SEE SECTION AA'.

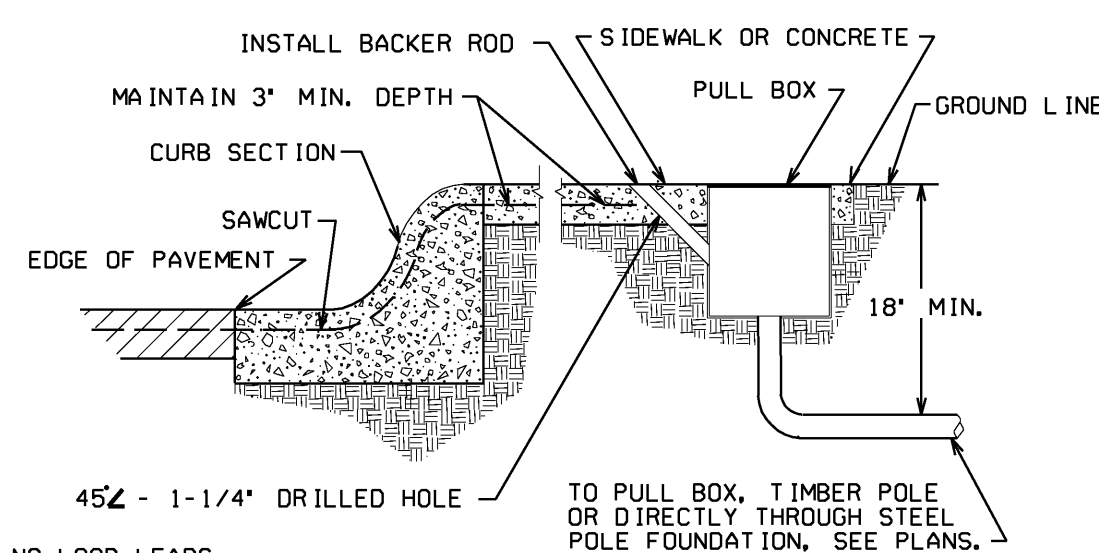


DETAIL "A"

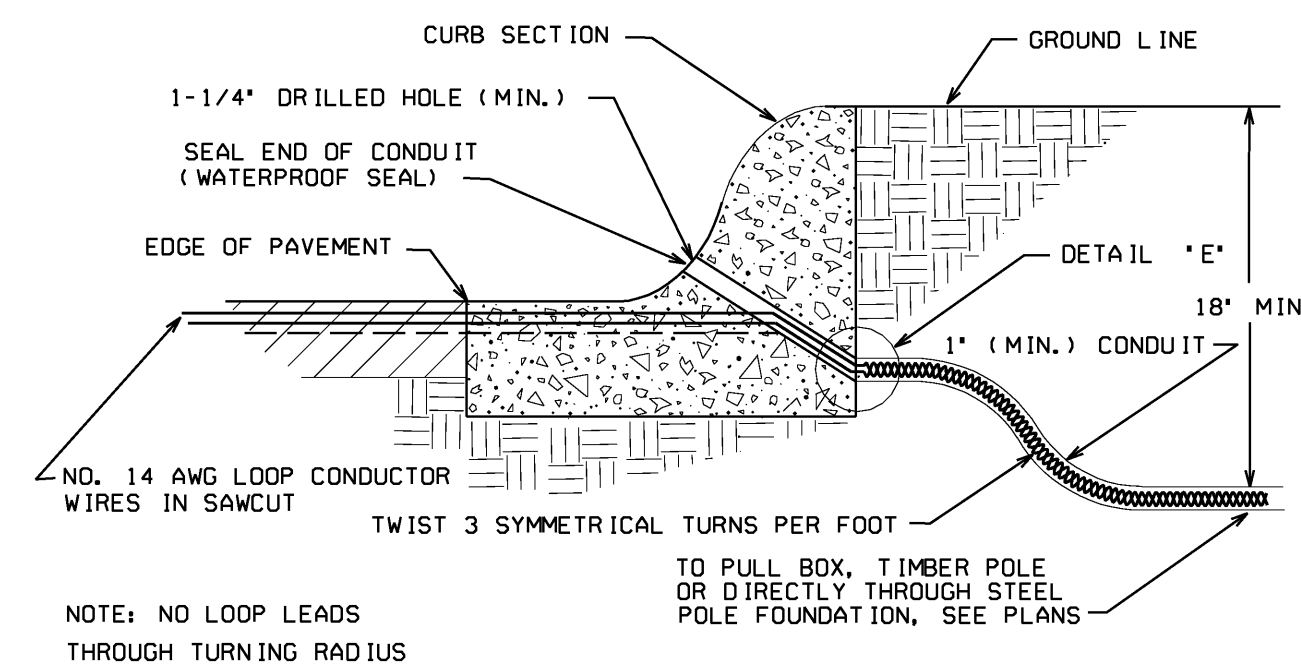
NOTE: USE FOR CONCRETE PAVEMENT ONLY.

DETAIL "E"

(WITH SIDEWALK)



(WITHOUT SIDEWALK)



NOTE: NO LOOP LEADS
THROUGH TURNING RADIUS

Diagram illustrating the installation of a multi-pair shielded loop lead-in cable. The diagram shows the cable path from the controller, through a pull box, and into the loop structure, with various annotations and dimensions.

Annotations:

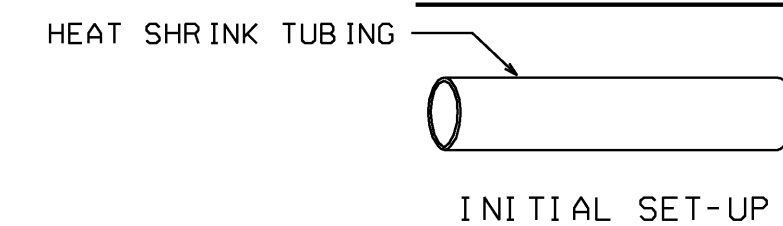
- PROVIDE 6 FEET OF SLACK FOR THE LOOP LEAD-INS FOR MAKING THE SPLICE(S) ABOVE GROUND
- MULTI-PAIR SHIELDED LOOP (PRE-TWISTED) LEAD-IN CABLE.
- *TRAFFIC SIGNAL* ON TOP OF PULL BOX COVER
- HOLD DOWN BOLTS WITH STAINLESS STEEL WASHERS & NUTS. NUTS SHALL BE RECESSED BELOW TOP OF COVER.
- 10' EP OR 3" BACK OF CURB
- DO NOT GROUND LOOP WIRE IN PULL BOX.
- ENDS OF CONDUIT SHALL BE SEALED AND BE WATERPROOF (TYP.).
- LOOP LEAD-INS (TWISTED 3 SYMMETRICAL TURNS PER FOOT)
- CONDUIT 2" MIN TO 4" MAX ABOVE GRAVEL
- COARSE GRAVEL
- 6" MIN. (TYP)
- SHIELDED CABLE
- TO CONTROLLER
- CONDUIT SIZE VARIES
- TO LOOP CUTS

Dimensions:

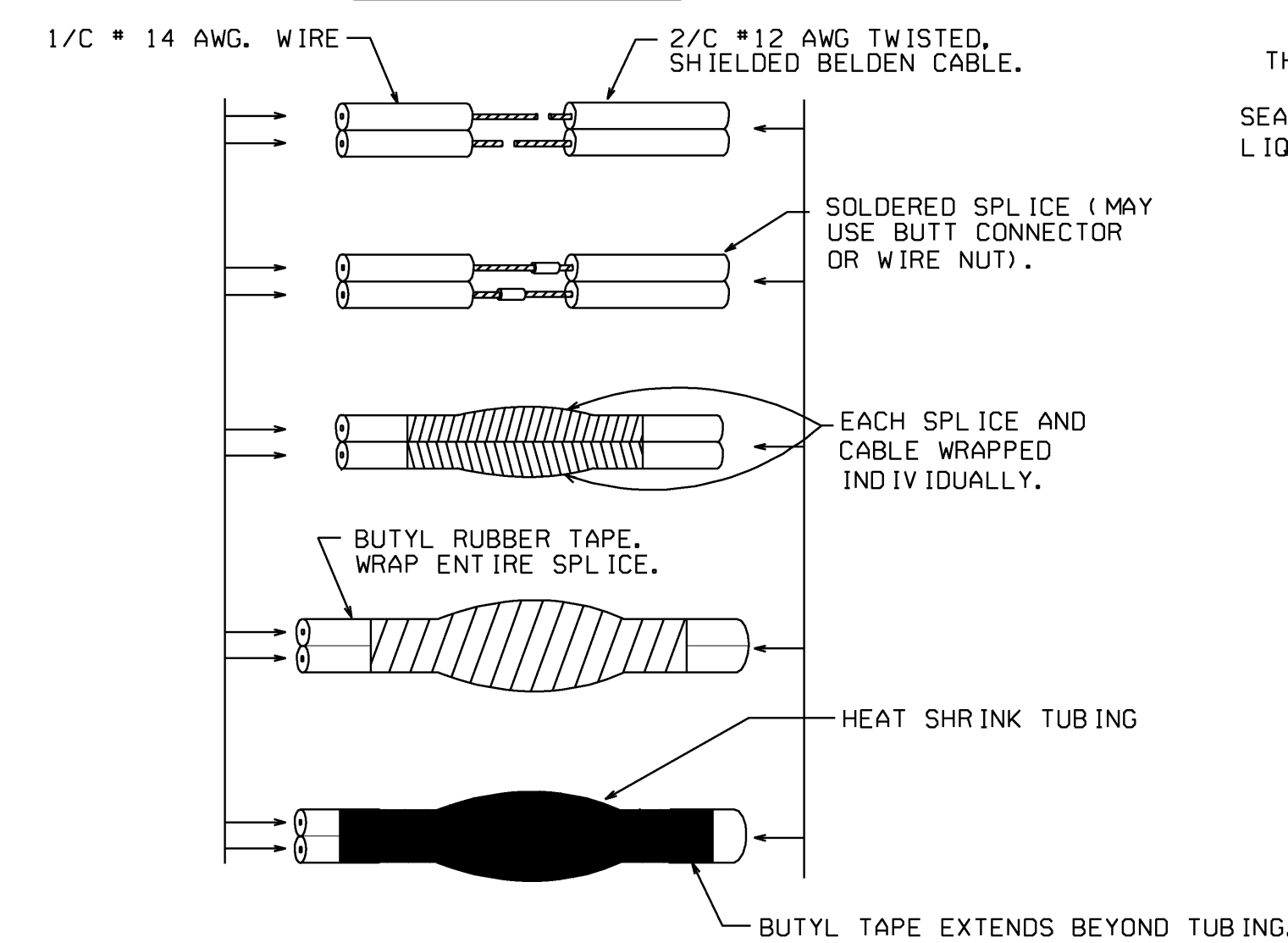
- 6'
- 12' MIN.
- 18' MIN.

ALTERNATE #1

ALTERNATE #1

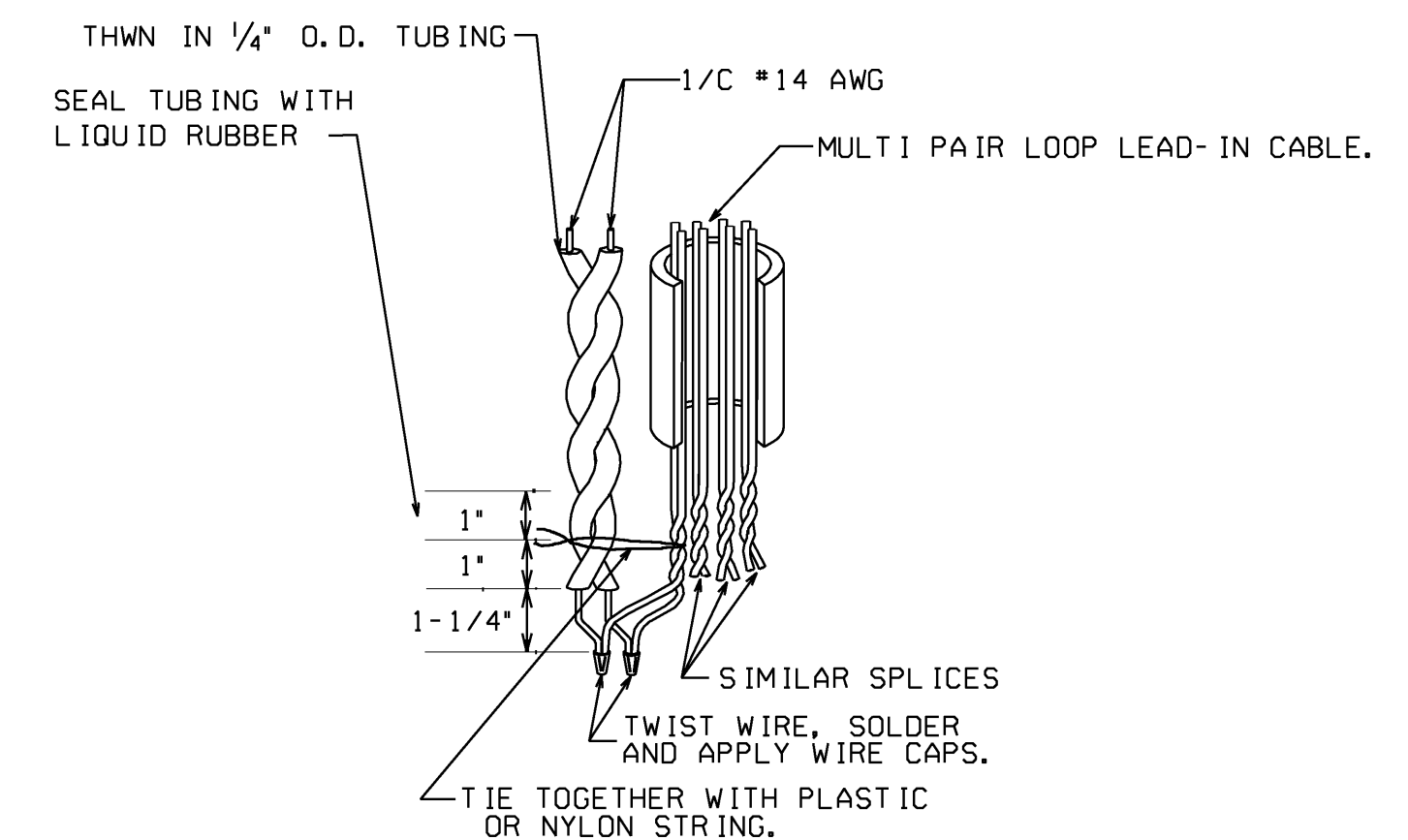


INITIAL SET-UP

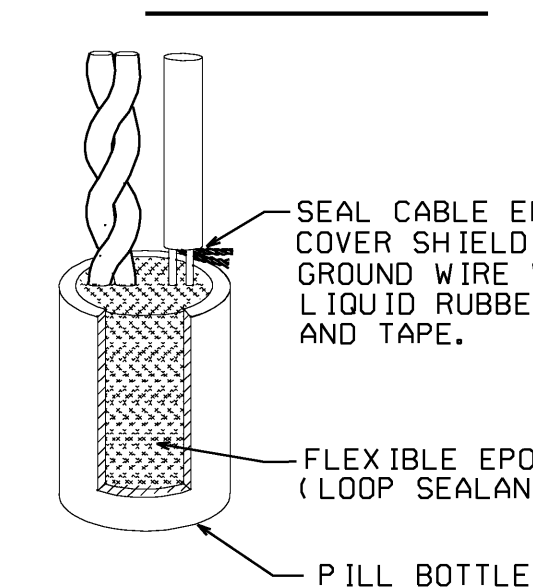


NOTE:
FINISHED SPLICE MUST BE WATERPROOF.

ALTERNATE #2



F IN ISHED SPL ICE



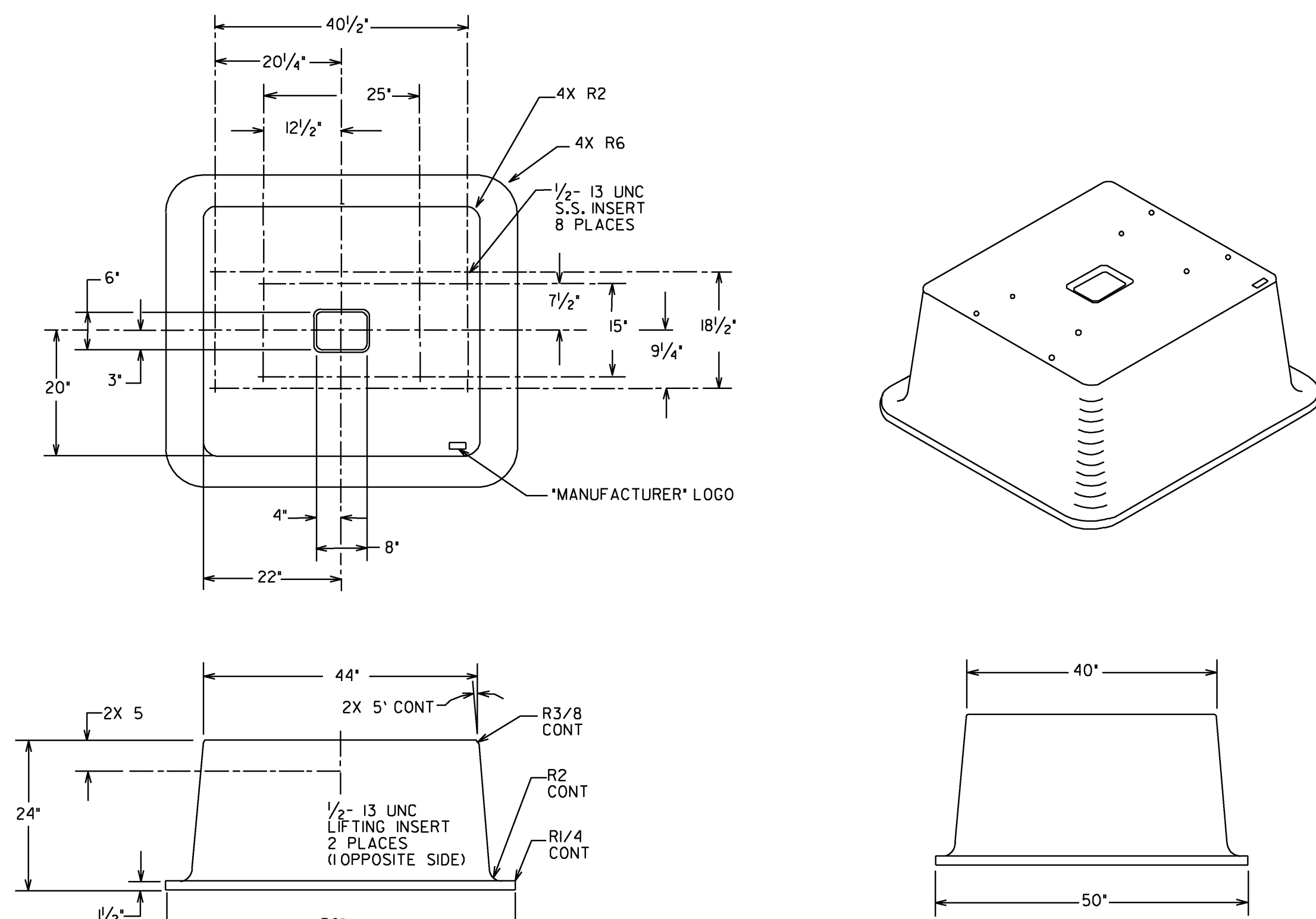
STATE	COUNTY	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.				

[illegible]

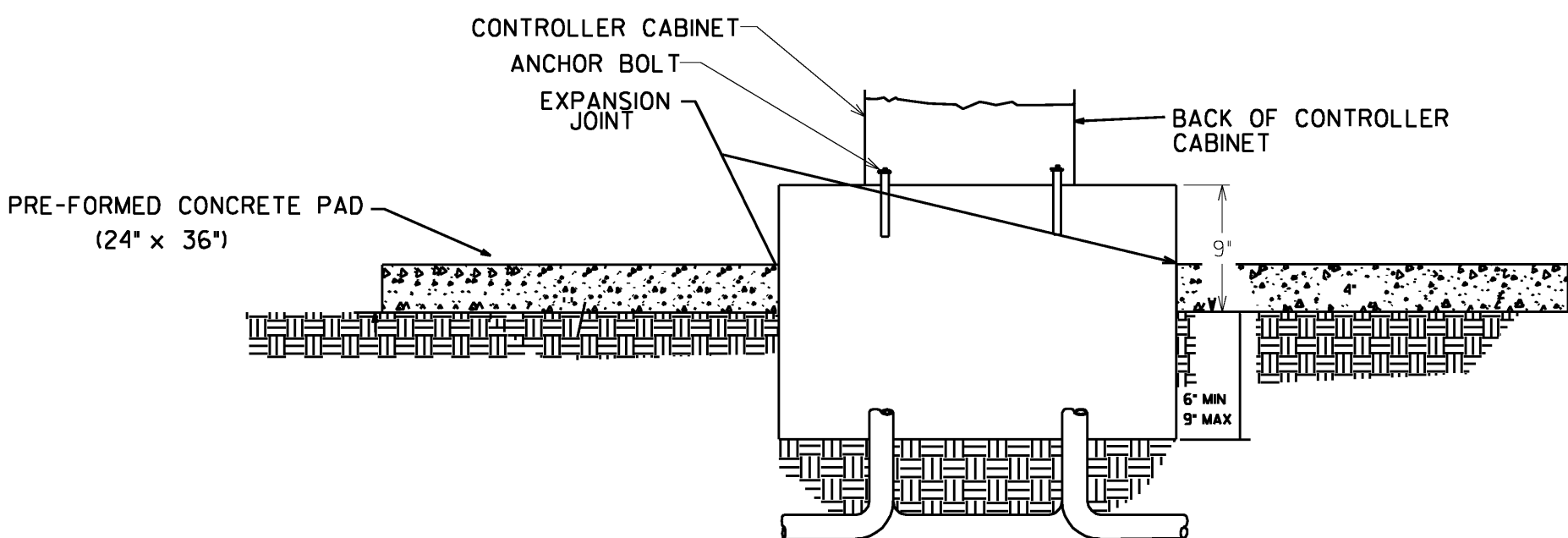
Guidelines For Usage On Metric Projects

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

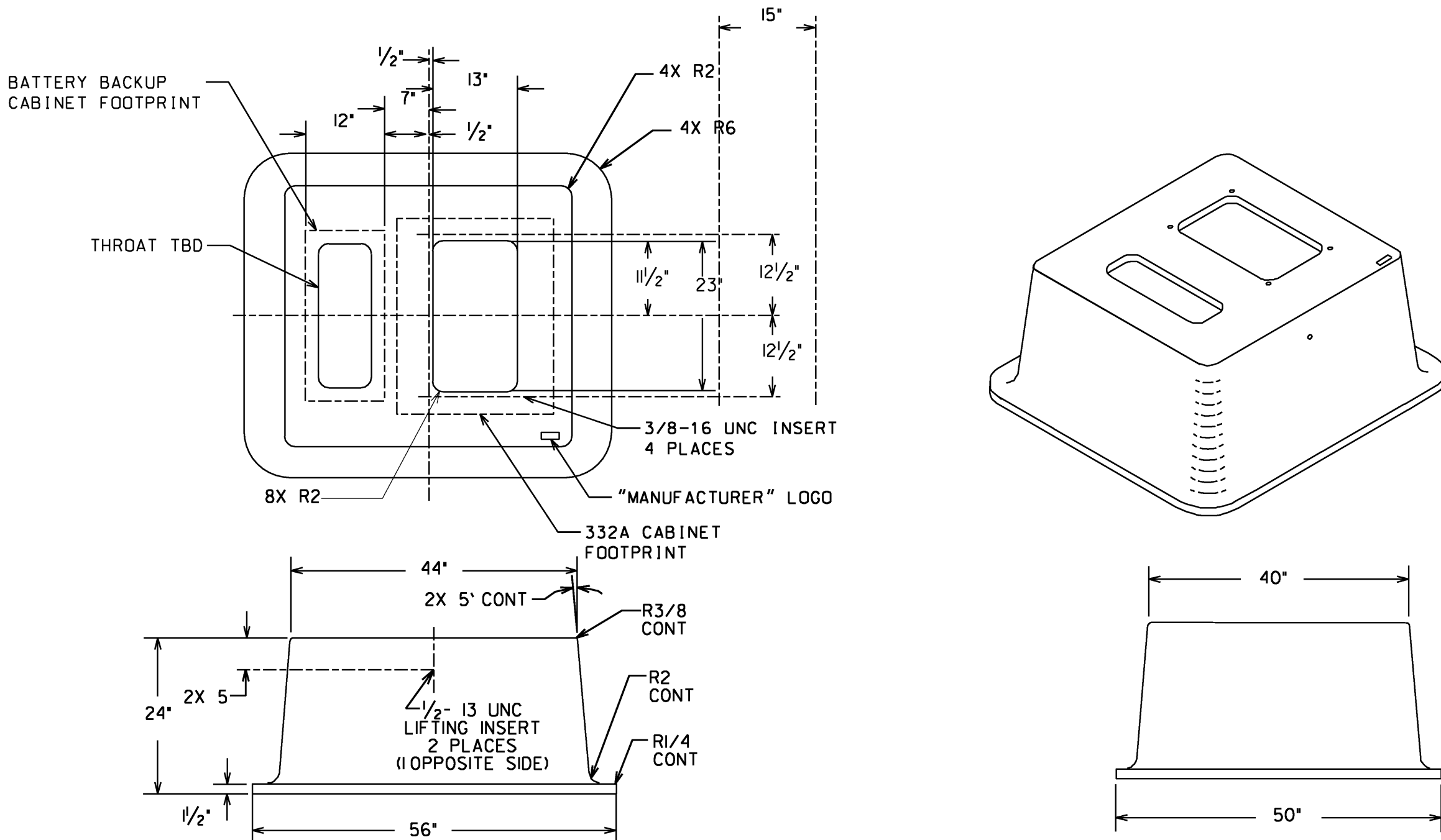
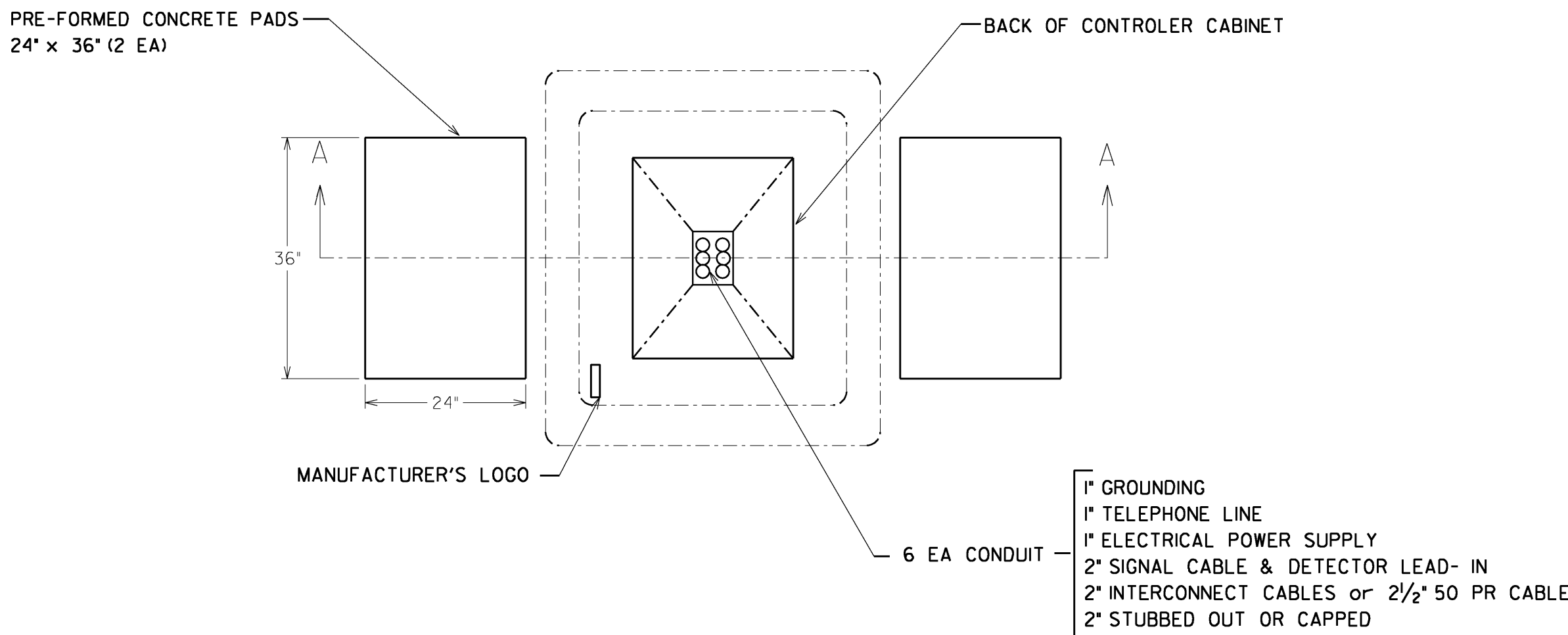
STATE	COUNTY	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.				



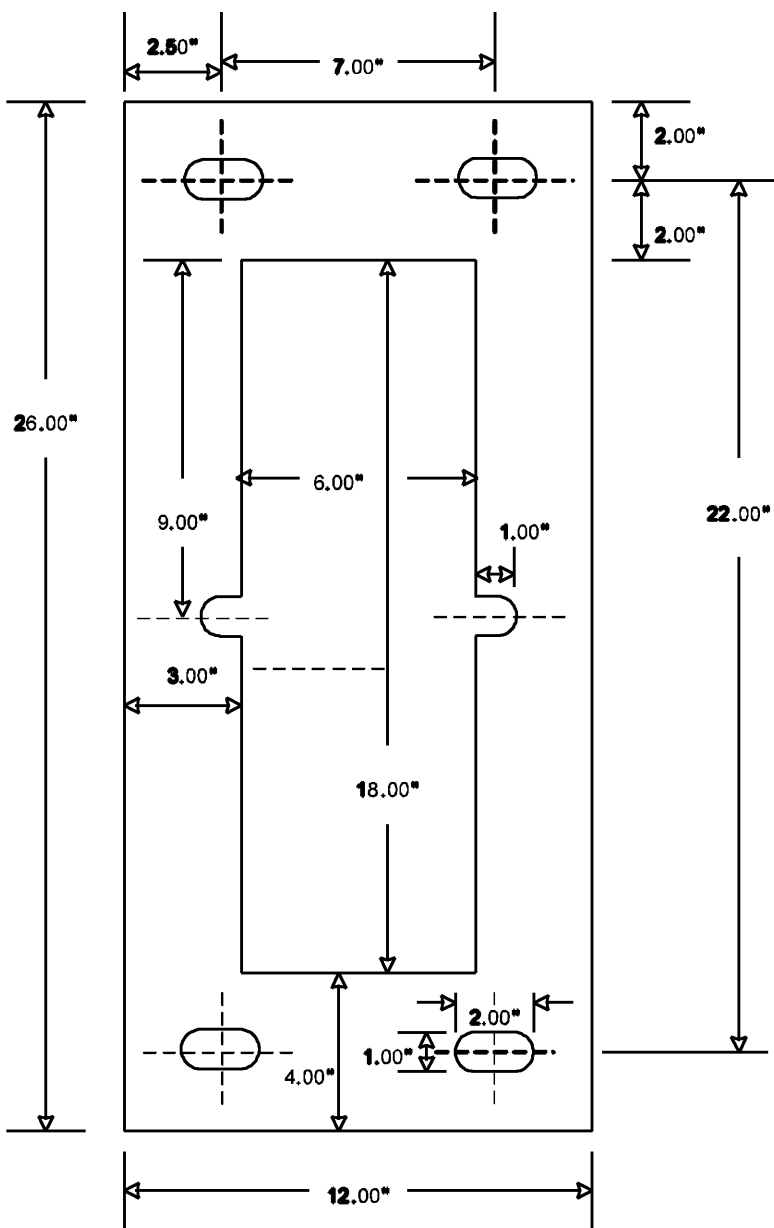
PREFABRICATED 332 CONTROLLER BASE



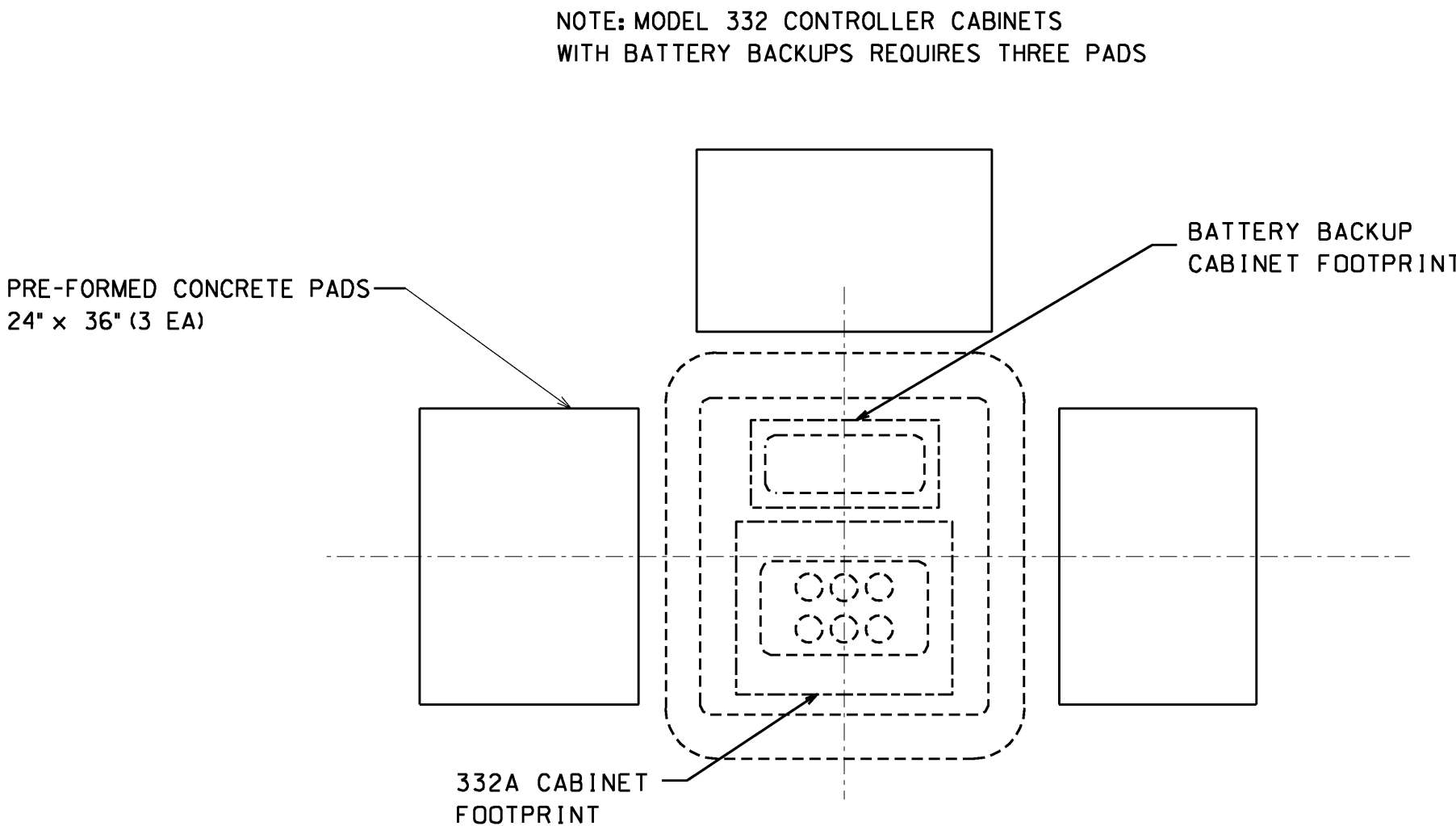
SECTION A-A



PREFABRICATED CONTROLLER BASE
WITH BATTERY BACKUP BASE MOUNT EXTENSION



BATTERY BACKUP BASE MOUNT
CABINET ANCHOR BOLT PATTERN

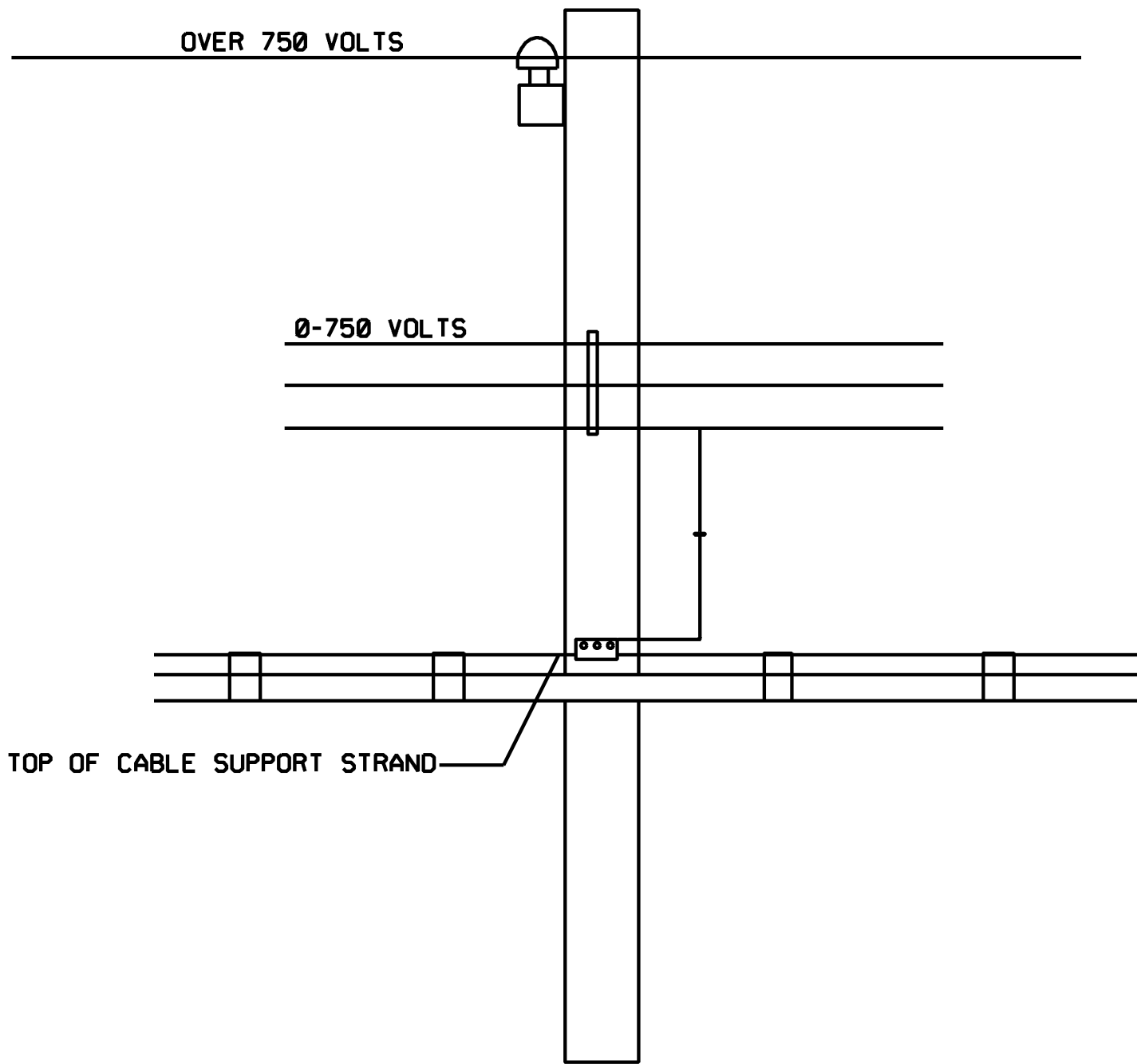


Guidelines For Usage On Metric Projects

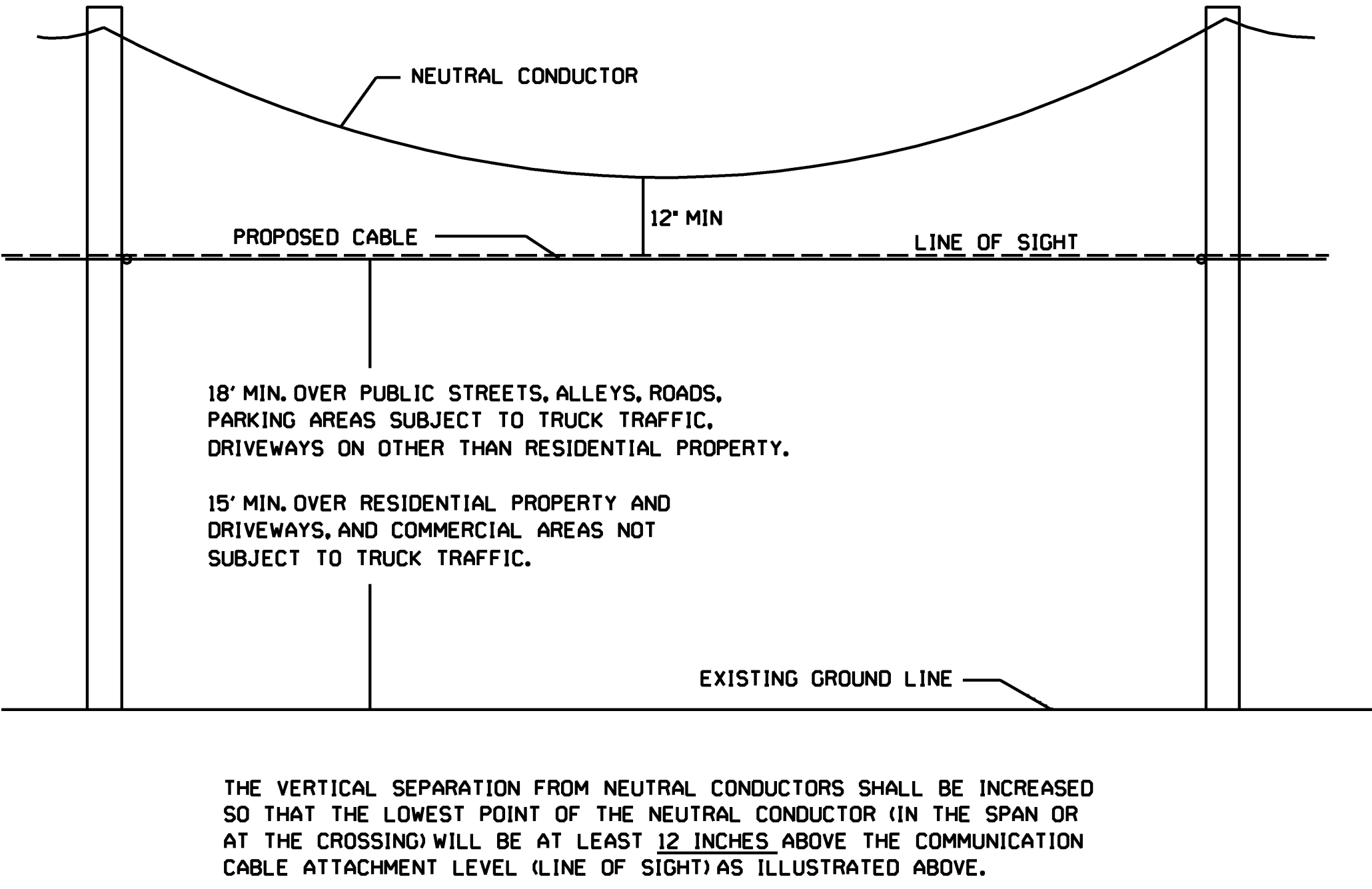
When these details are incorporated into plans and or projects that are being prepared or constructed in metric units, exact or precise conversion to metric units is not required. The dimensions shown that are in feet and inches may be converted to corresponding metric units using the following "Rounded-Off"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

				DATE	DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA	
				REVISION DESCRIPTION	TRAFFIC SIGNAL DETAIL CABINET BASE DETAIL	
				REV. BY:	APRIL 2010 NOT TO SCALE - REPORT ERRORS	DETAIL NUMBER TS-03

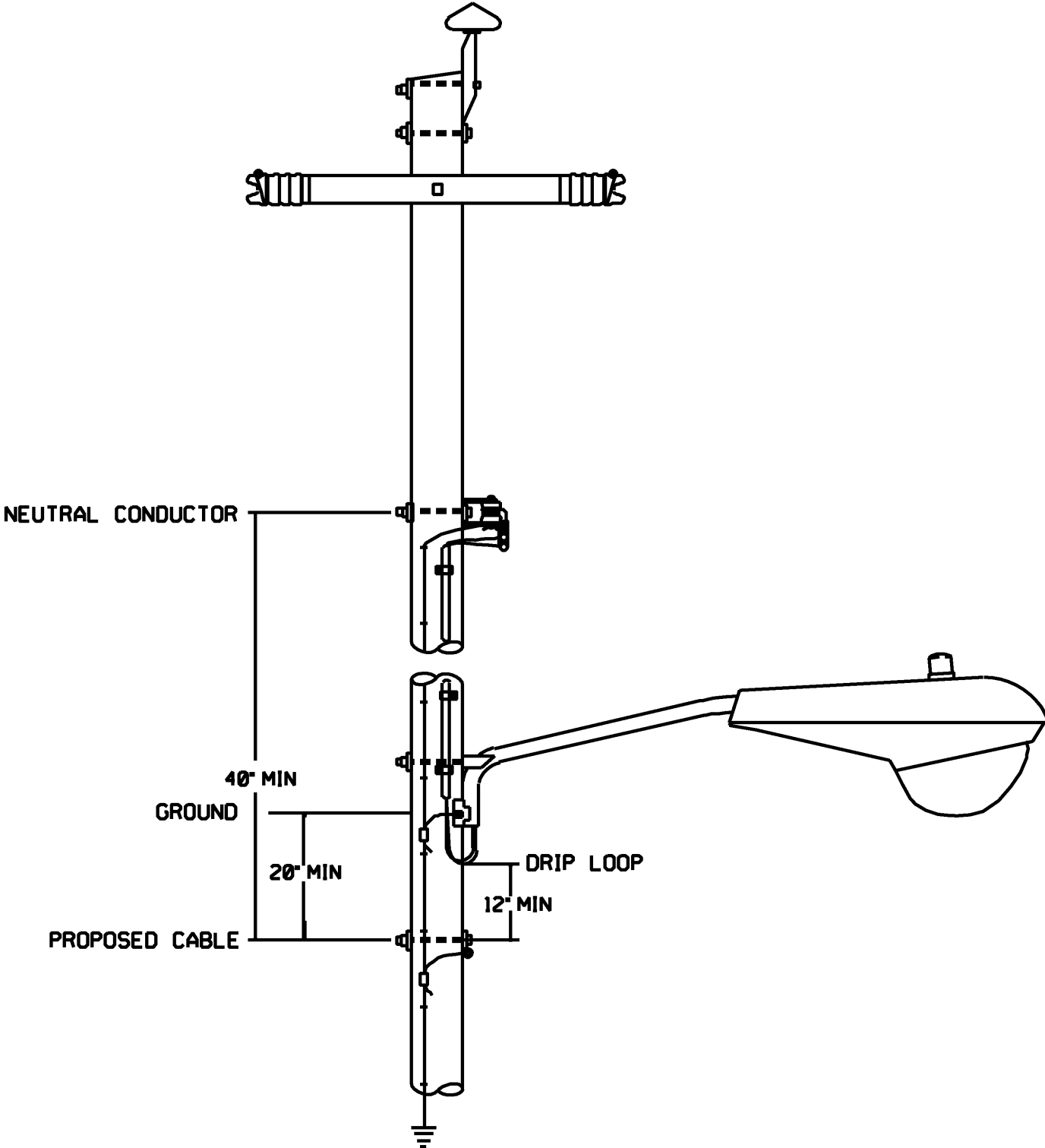
TYPICAL DETAIL "A"
TYPICAL POWER SEPARATION
AT POLE



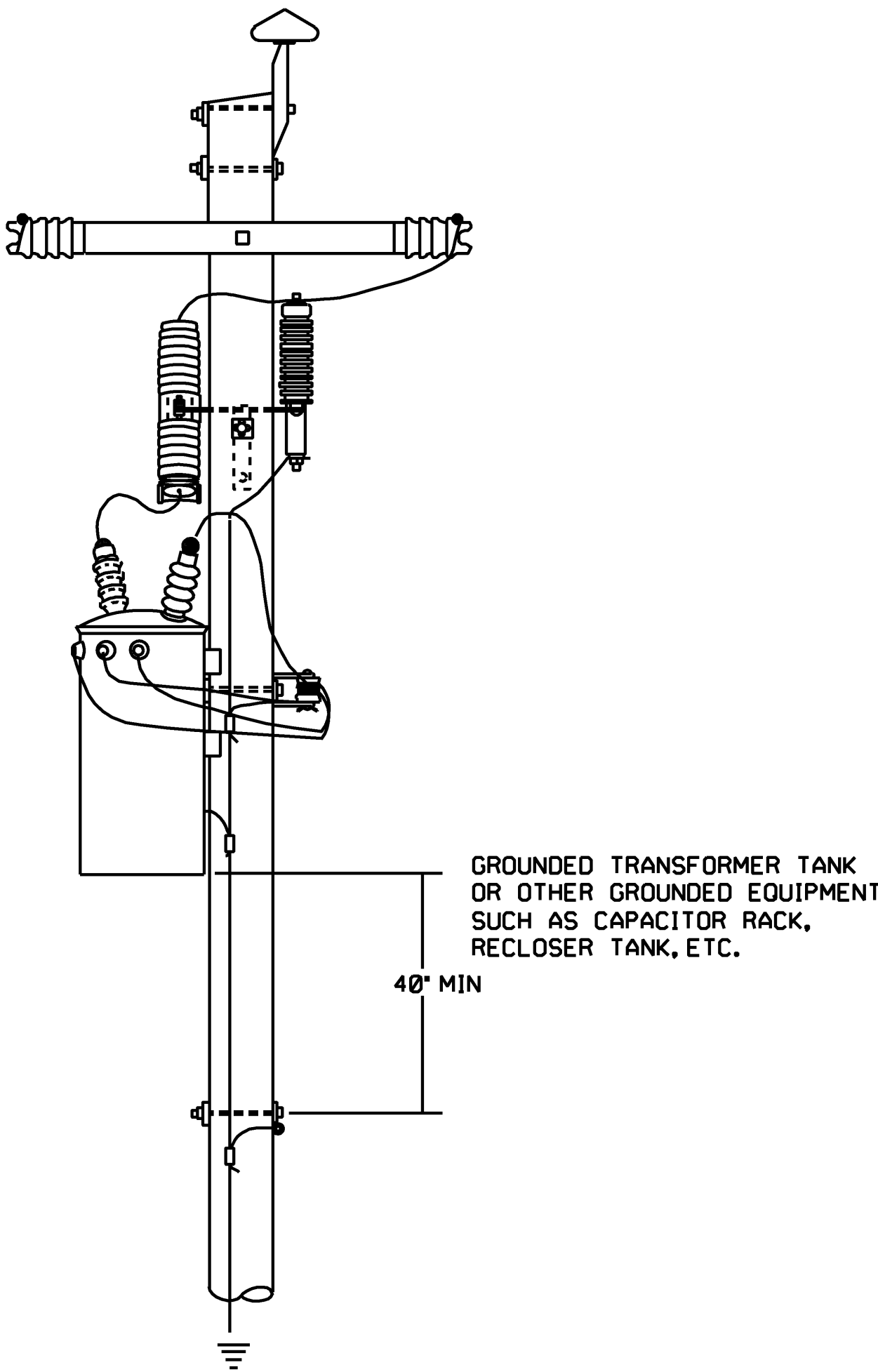
TYPICAL DETAIL "B"
SEPARATION REQUIREMENTS FOR MID-SPAN
AND AT CROSSINGS



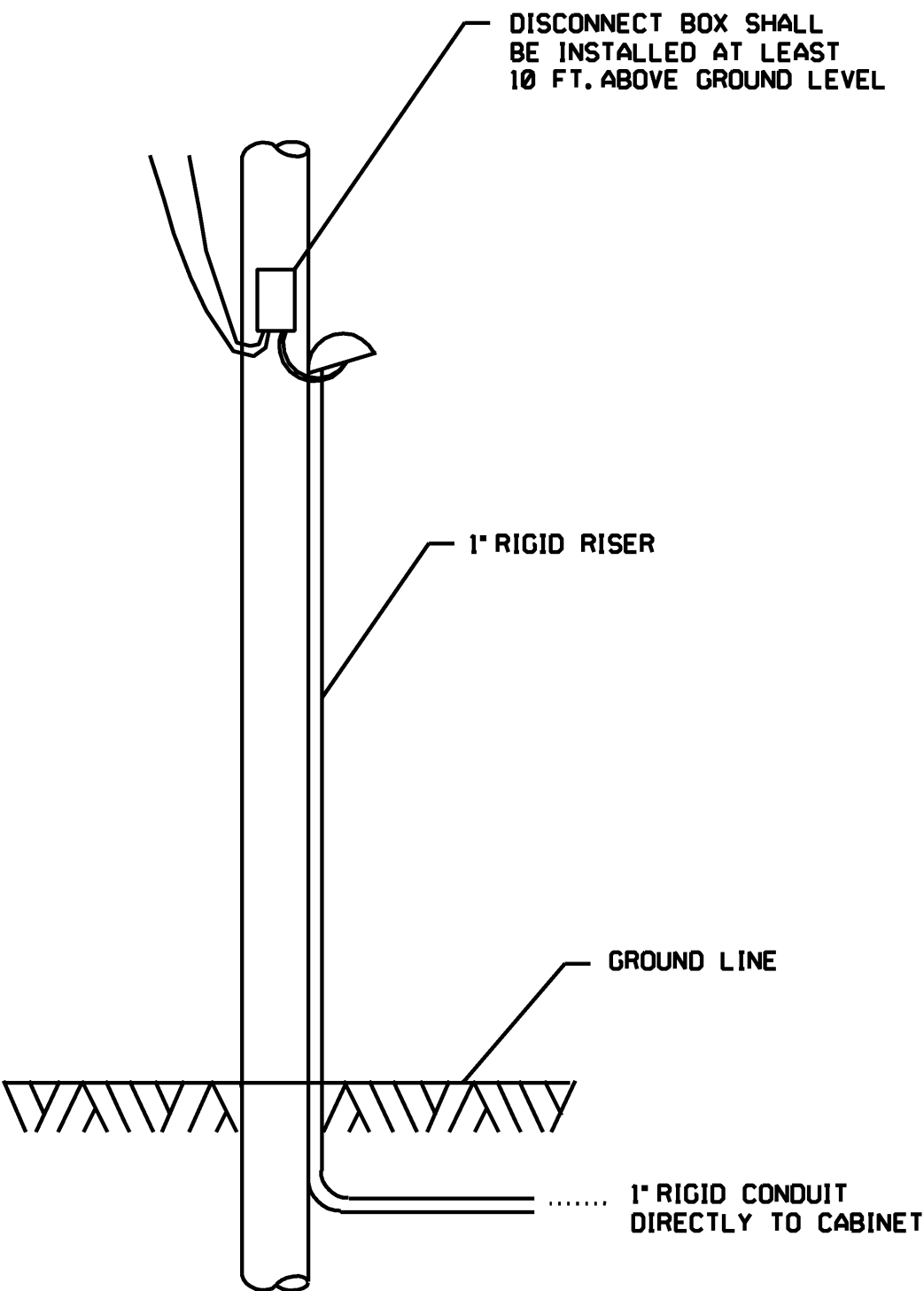
TYPICAL DETAIL "C"
STREET LIGHT BRACKET SEPARATION
NOTE: SEE TABLE BELOW



TYPICAL DETAIL "D"
TYPICAL TRANSFORMER AND POWER RISER
SEPARATION WITHOUT GUARD ARM



TYPICAL DETAIL "E"
TYPICAL DISCONNECT BOX INSTALLATION



VERTICAL CLEARANCES AT THE POLE FOR SPAN WIRES
AND BRACKETS FOR STREET LIGHTS (RULE 238C)

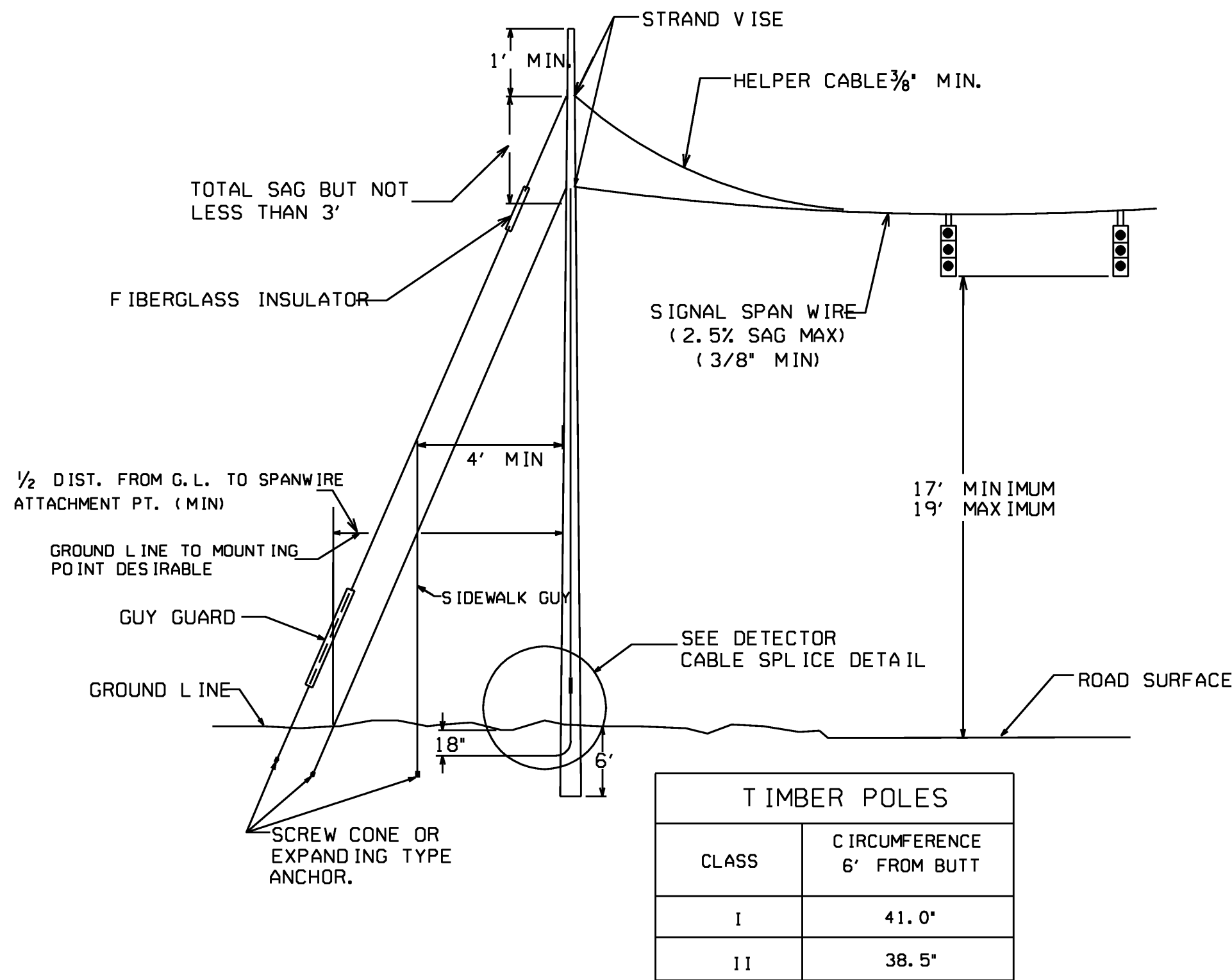
TYPE OF CLEARANCE	CLEARANCE (IN.)			
	IF EFFECTIVELY GROUNDED	IF NOT EFFECTIVELY GROUNDED		
		FOR LUMINAIRES UP TO 150V	OVER 150V	FOR TROLLEY CONDUCTORS
ABOVE COMMUNICATION CROSS ARMS	20 (A)	20 (A)	20 (A)	20 (A)
BELOW COMMUNICATION CROSS ARMS	24	24	40	24
ABOVE COMMUNICATION CABLES	4	20 (A)	20 (A)	12
BELOW COMMUNICATION CABLES	4	20	40	12
FROM COMMUNICATION TERMINAL BOXES	4	20 (A)	20 (A)	12 (B)
FROM COMMUNICATION BRACKETS BRIDLE WIRE RINGS, AND DRIVE HOOKS	4	16 (A)	16 (A)	4

NOTES A. MAY BE REDUCED TO 12 IN. FOR WIRES OR PARTS OF BRACKETS 40 IN. OR MORE FROM SURFACE OF POLE
B. IF OBTAINABLE IF NOT, MAXIMUM OBTAINABLE

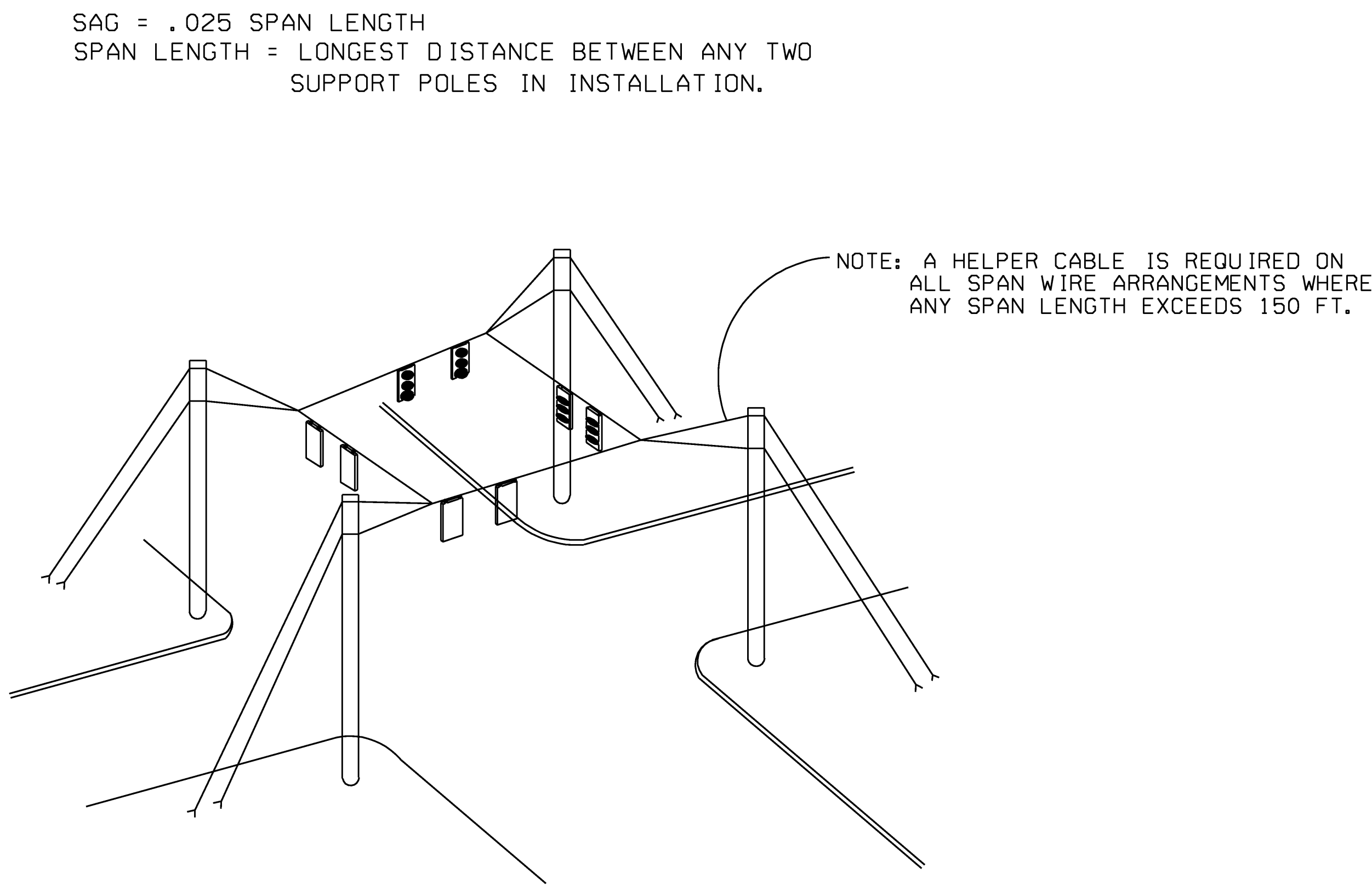
Guidelines For Usage On Metric Projects

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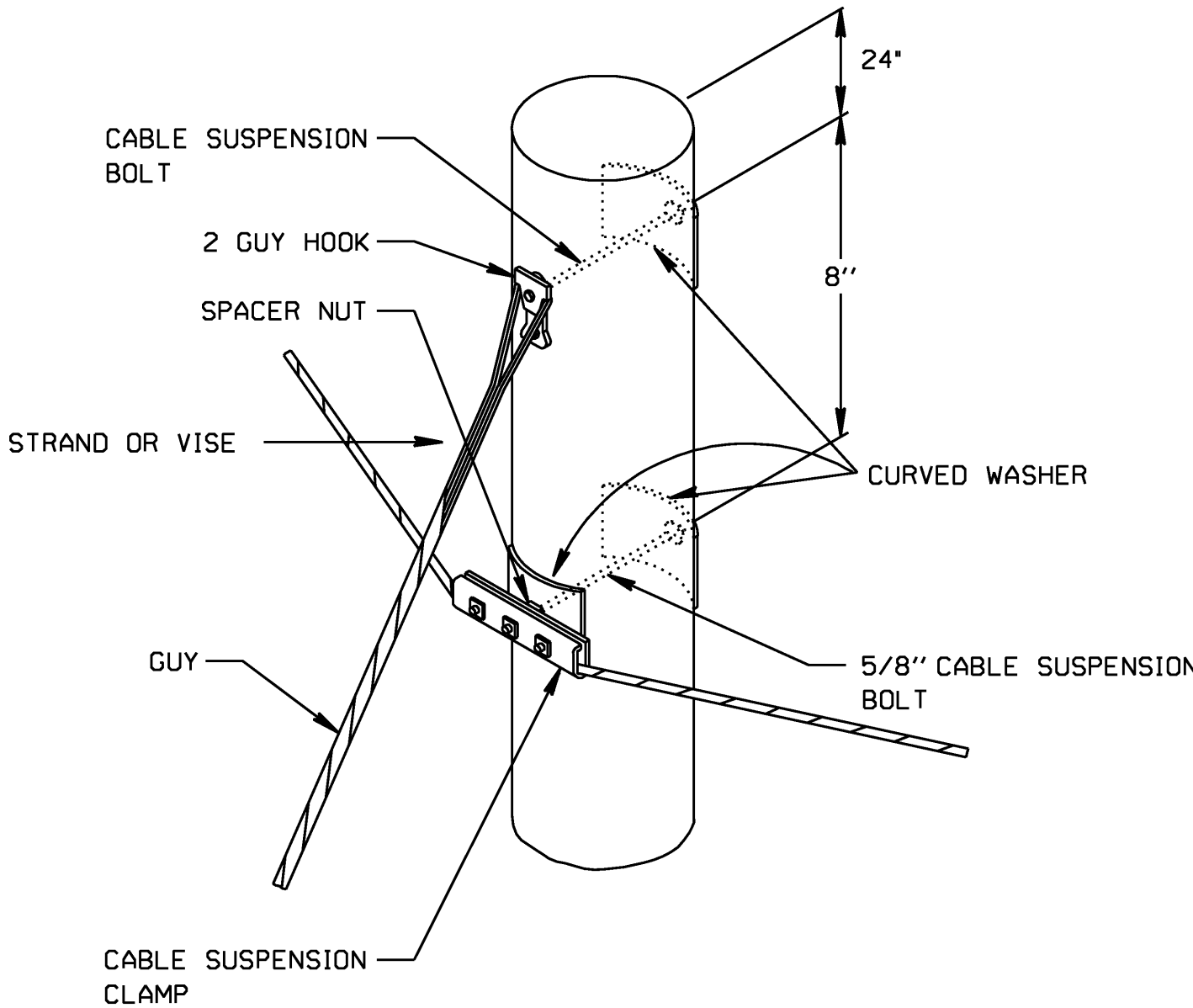
						DATE	DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA
						REVISION DESCRIPTION	TRAFFIC SIGNAL DETAIL UTILITY CLEARANCE DETAIL
						REV. BY:	DETAIL NUMBER
							APRIL 2010 NOT TO SCALE - REPORT ERRORS
							TS-08



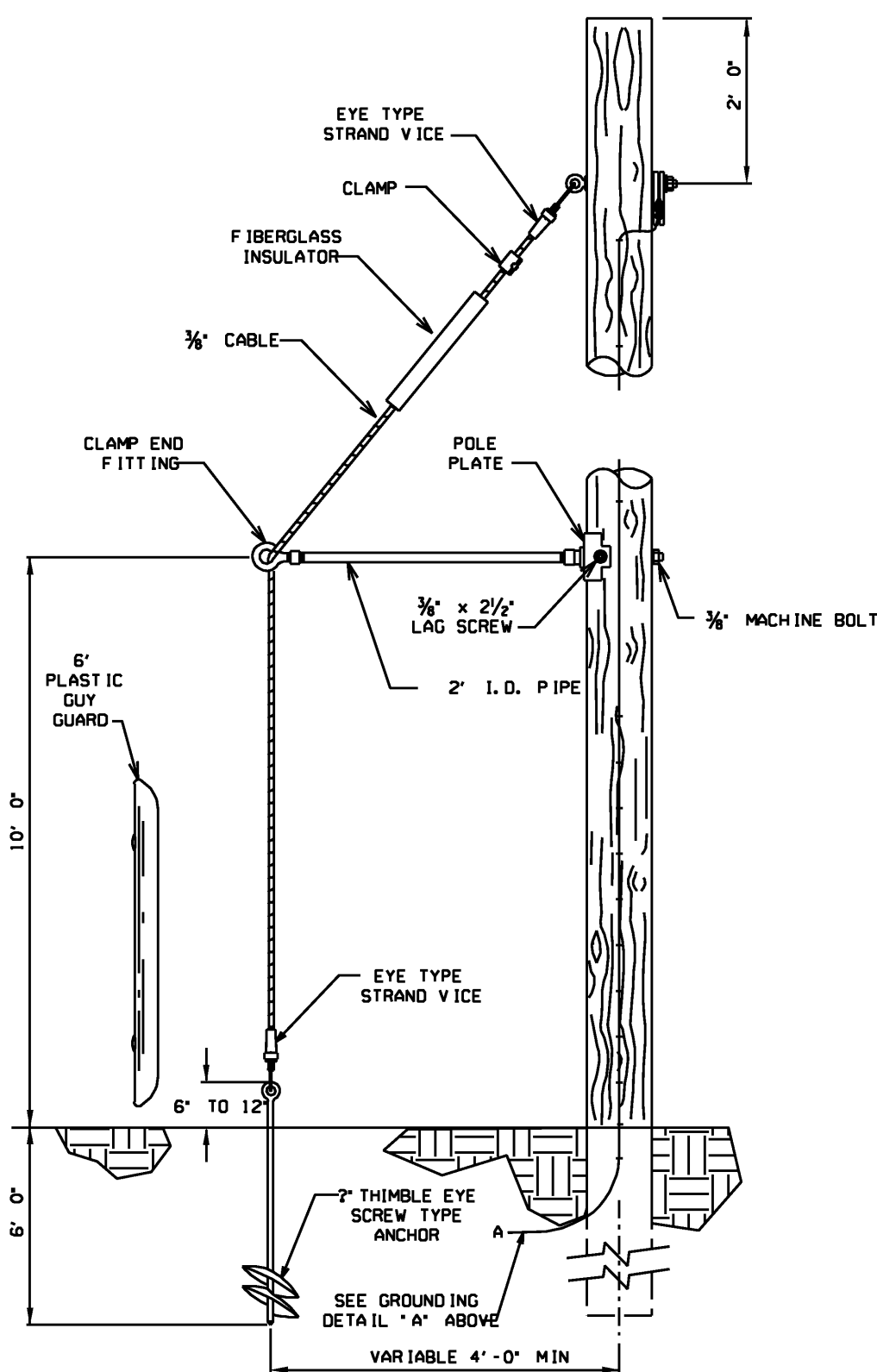
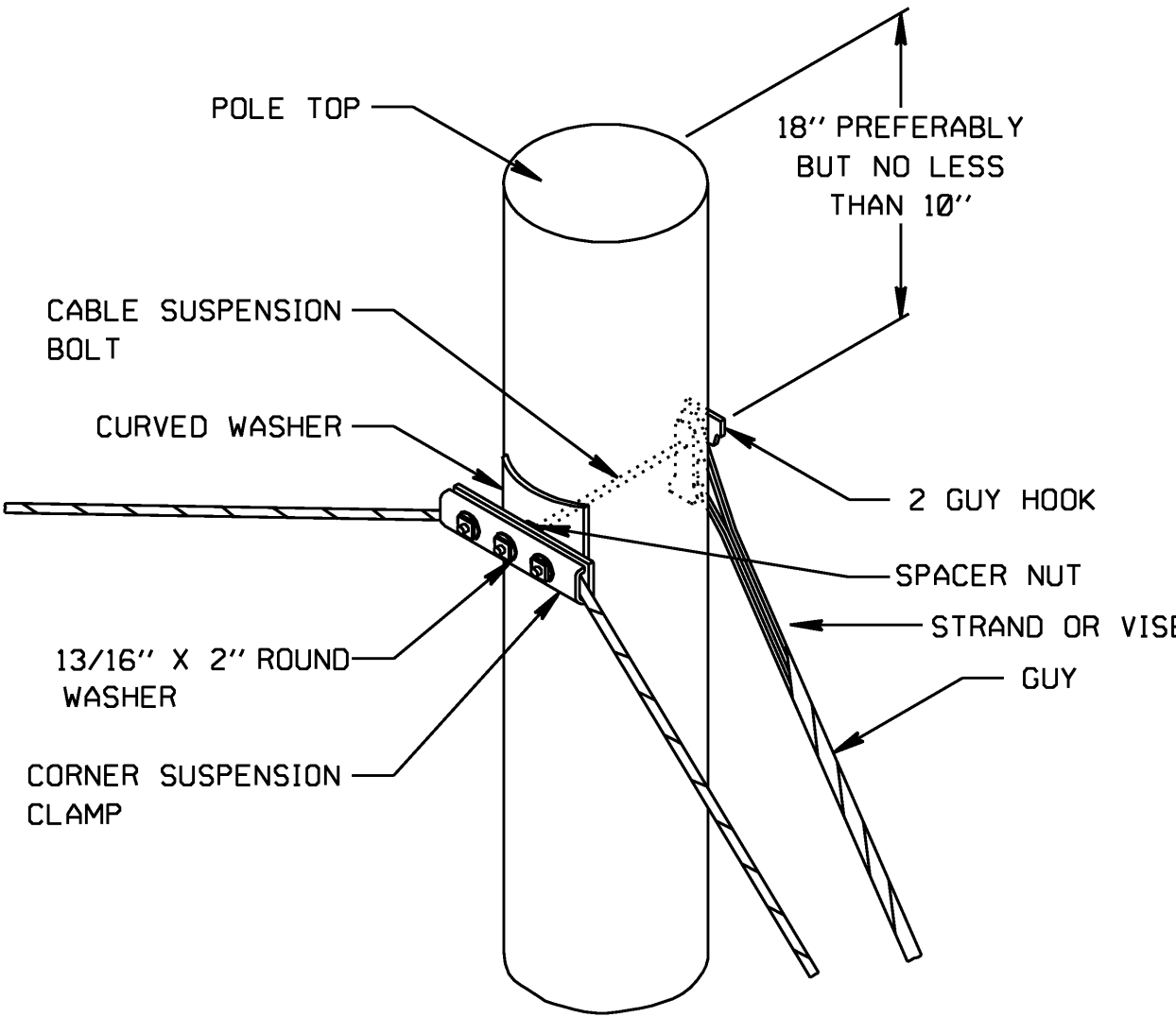
TYP. TIMBER SIGNAL POLE DETAIL



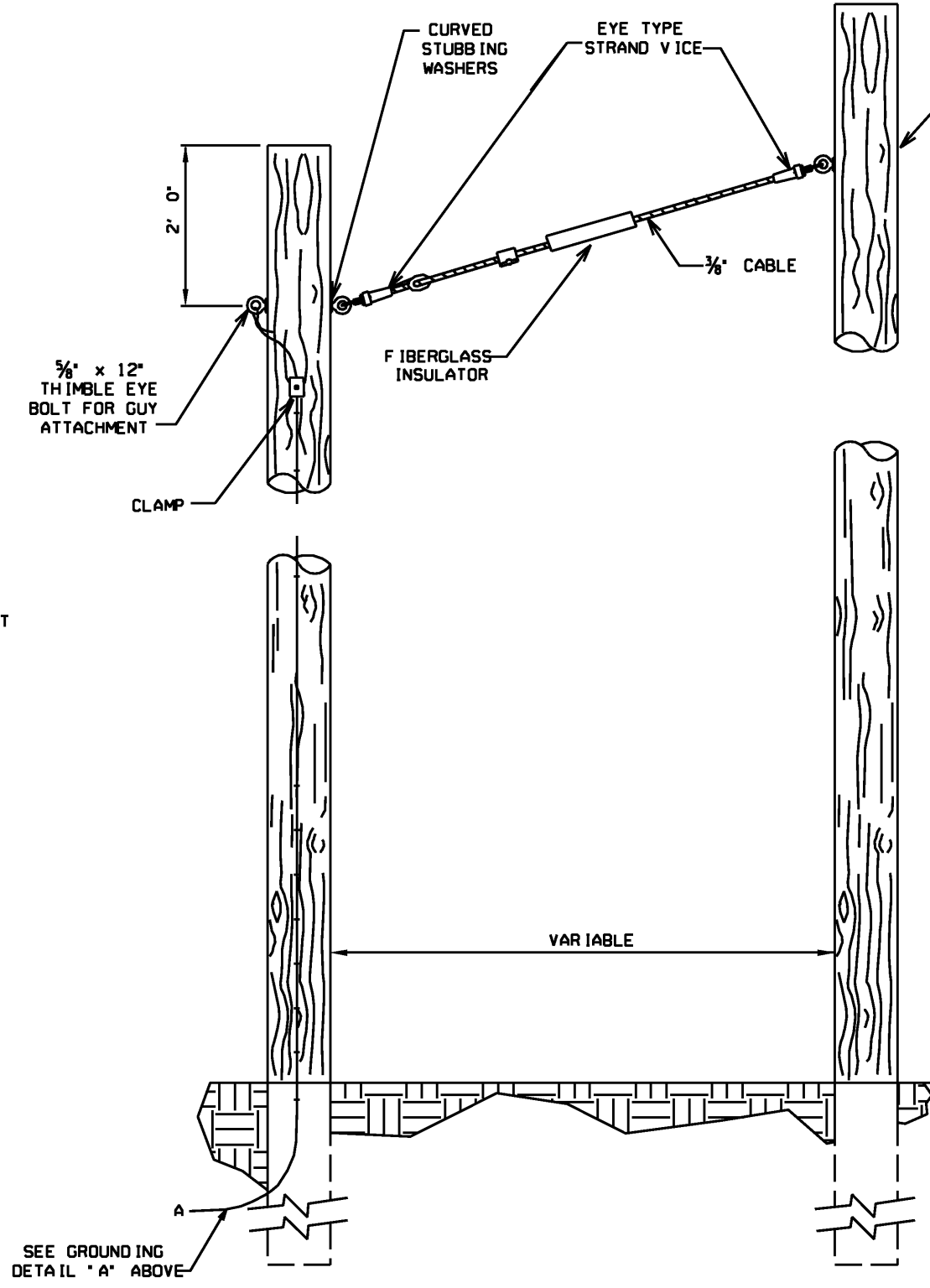
TYPICAL DETAIL "D"
SUSPENSION STRAND - PULL TOWARD
POLE - LESS THAN 5 FEET



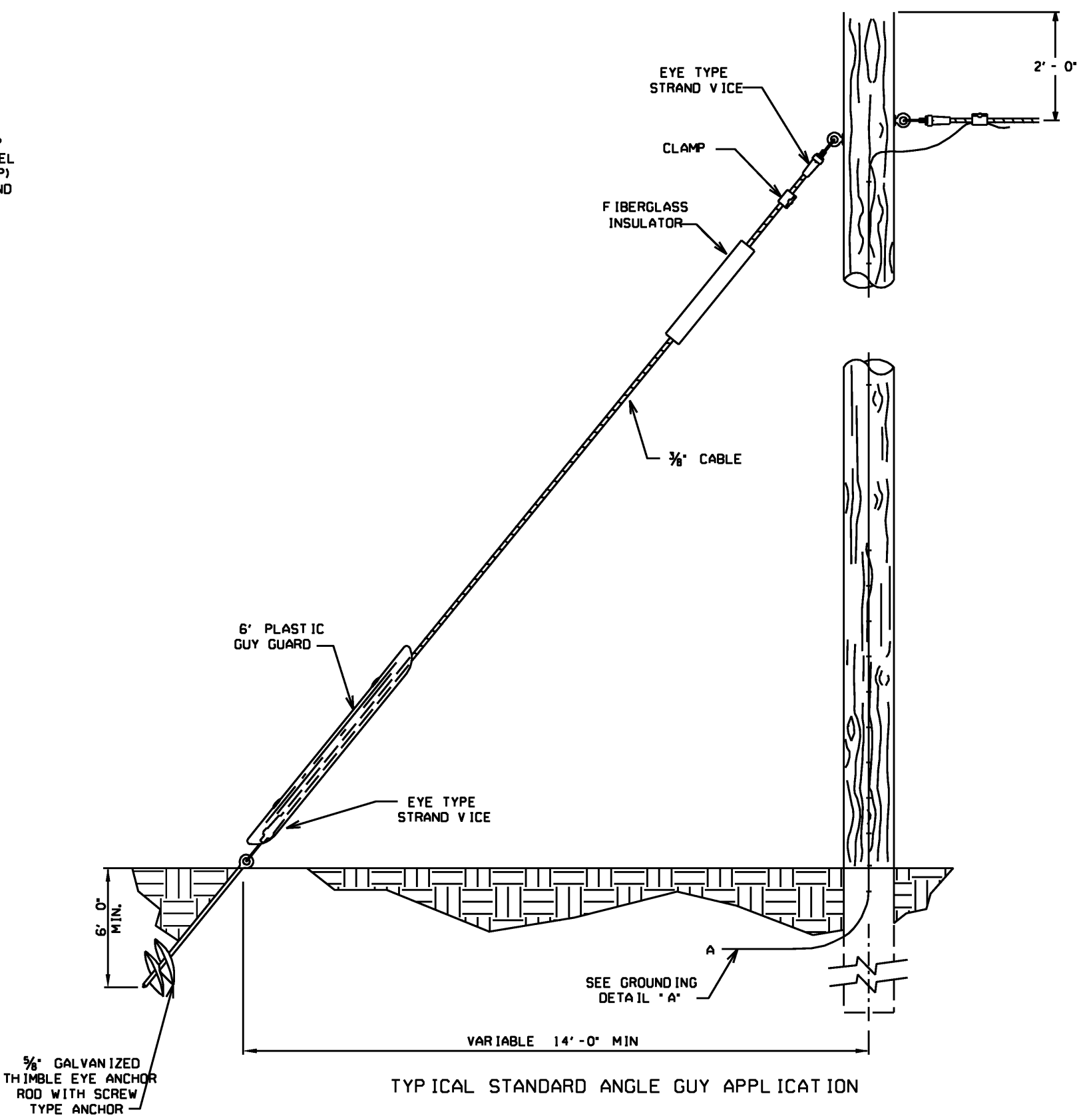
TYPICAL DETAIL "E"
SUSPENSION STRAND - PULL AWAY
FROM POLE - 5 FEET OR MORE



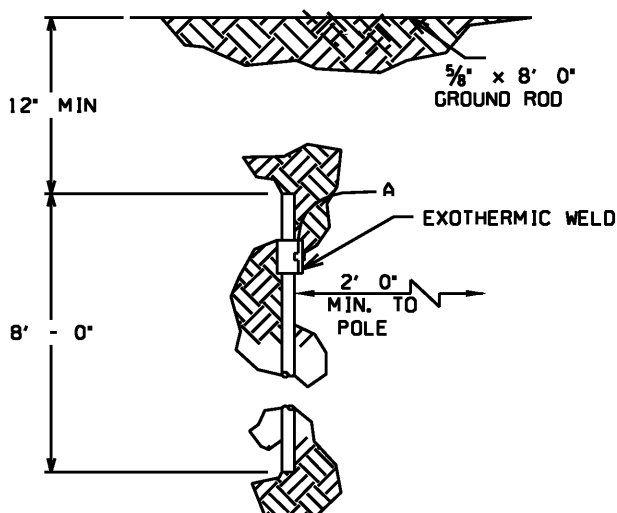
TYPICAL SIDEWALK GUY APPLICATION



TYPICAL AERIAL GUY APPLICATION



TYPICAL STANDARD ANGLE GUY APPLICATION



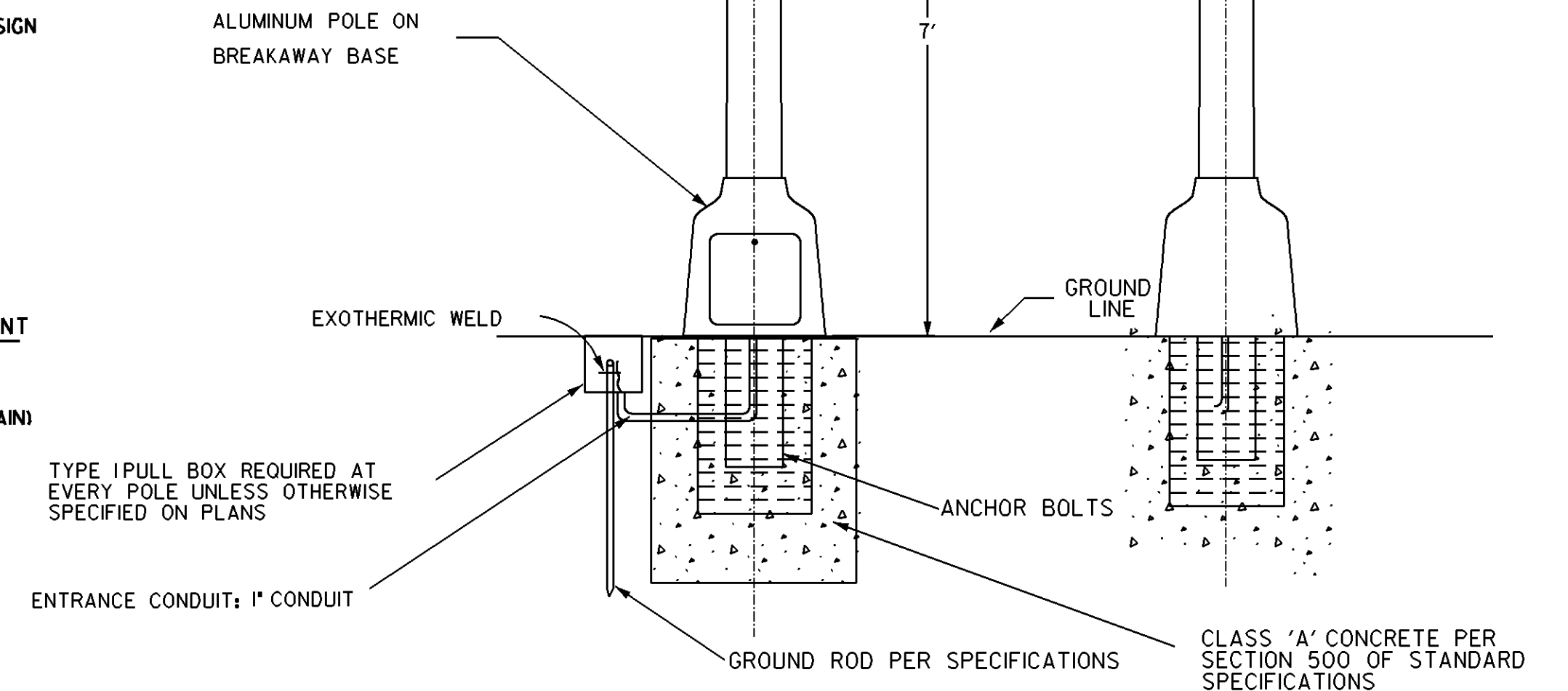
GROUNDING DETAIL "A"
(REQUIRED AT EACH POLE LOCATION)

Guidelines For Usage On Metric Projects

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		DATE	DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA
		REVISION DESCRIPTION	TRAFFIC SIGNAL DETAIL STANDARD GUYING DETAILS
REV. BY:			DETAIL NUMBER
		APRIL 2010	TS-09
NOT TO SCALE - REPORT ERRORS			

PEDESTRIAN POLE MOUNTED FLASHING SCHOOL SIGNAL

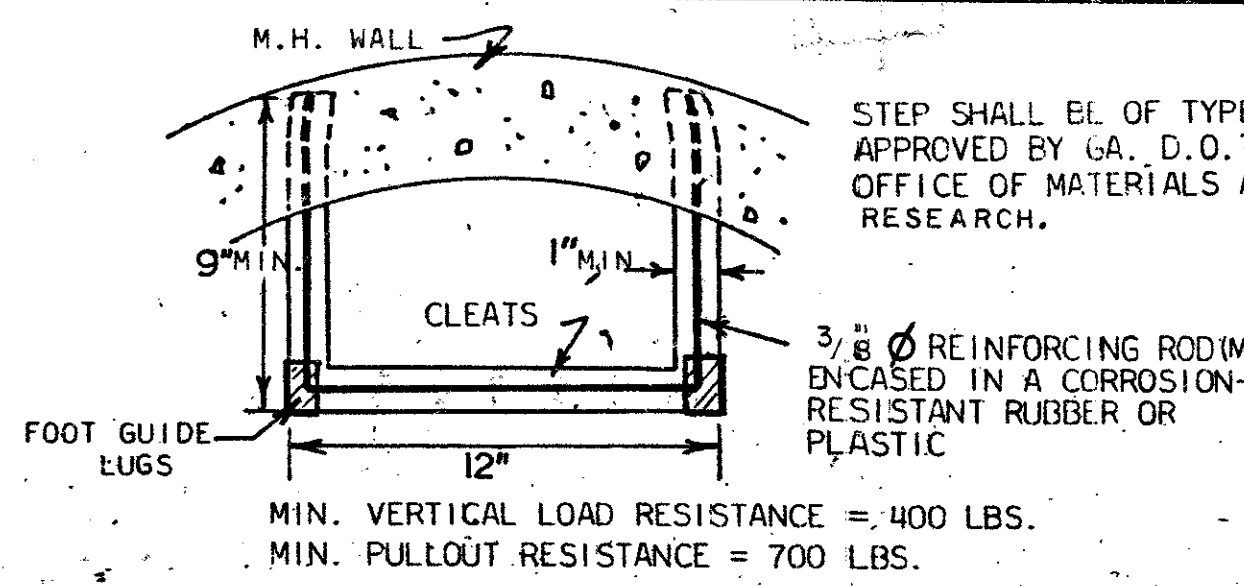
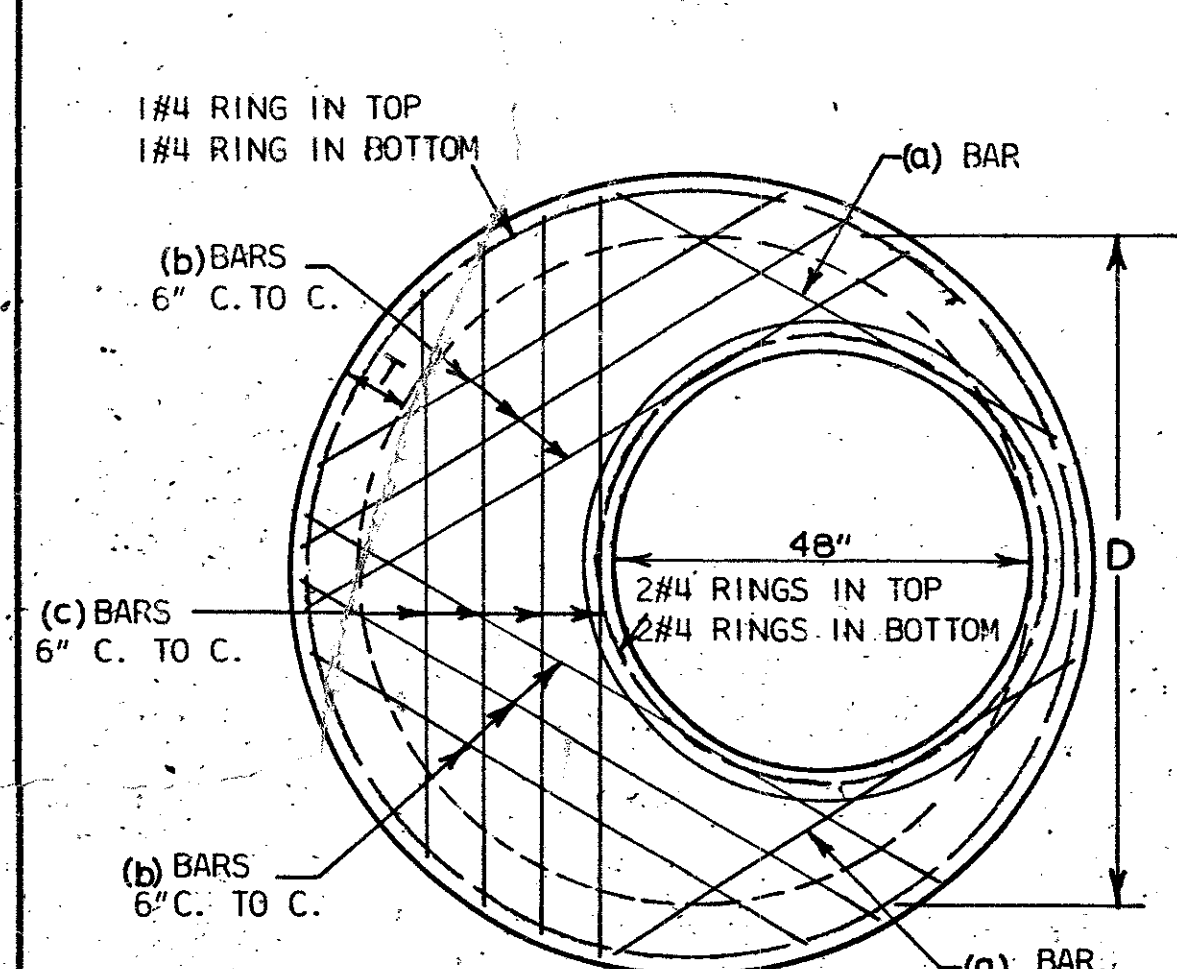


4. TYPE III (ENCAPSULATED LENS) REFLECTIVE SHEETING SHALL BE USED FOR ALL STANDARD HIGHWAY SIGNS REQUIRING RETROREFLECTIVE BACKGROUNDS EXCEPT AS SPECIFIED BELOW OR SPECIFIED OTHERWISE IN THE PLANS. EITHER CLASS 1 OR CLASS 2 ADHESIVE BACKING IS PERMISSIBLE.
5. TYPE XI (VERY HIGH INTENSITY) YELLOW GREEN FLUORESCENT BACKGROUND SHALL BE USED FOR SCHOOL WARNING SIGNS, INCLUDING THE "SCHOOL" PORTION OF THE SCHOOL SPEED LIMIT (S5-1) SIGN, AND INCLUDING ANY SUPPLEMENTAL PLAQUES USED IN ASSOCIATION WITH THESE WARNING SIGNS, SHALL USE TYPE XI (VERY HIGH INTENSITY) YELLOW-GREEN FLUORESCENT BACKGROUND WITH A BLACK LEGEND AND BORDER UNLESS OTHERWISE NOTED IN THE M. U. T. C. D.
6. REFER TO GDOT TRAFFIC SIGNAL STANDARD DETAILS AND GDOT STANDARD SPECIFICATIONS 647 AND 925.
7. DETAILS SHOWN IS FOR WOOD POST AND ALUMINUM POLE. GALVANIZED SQUARE TUBE STEEL POST MAY BE SUBSTITUTED. REFER TO STANDARD SPECIFICATIONS SECTION 911. GALVANIZED SQUARE TUBE POSTS MAY BE USED AS APPROVED BY THE DEPARTMENT OF TRANSPORTATION ENGINEER.
8. IF WARNING BEACONS HAVE MORE THAN ONE SIGNAL SECTION, THEY SHALL FLASH ALTERNATELY.
9. SUBMIT ALTERNATE MOUNTING METHODS, TO THE OFFICE OF TRAFFIC OPERATIONS FOR APPROVAL PRIOR TO FABRICATION AND INSTALLATION.

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

								DATE	DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA					
								REVISION DESCRIPTION	TRAFFIC SIGNAL DETAIL FLASHING SCHOOL ASSEMBLY POST MOUNTED INSTALLATION					
								REV. BY:					DETAIL NUMBER	
									<u>FEBRUARY 2012</u>				TS-I2B	
									NOT TO SCALE - REPORT ERRORS					

NUMBER
LOO L D

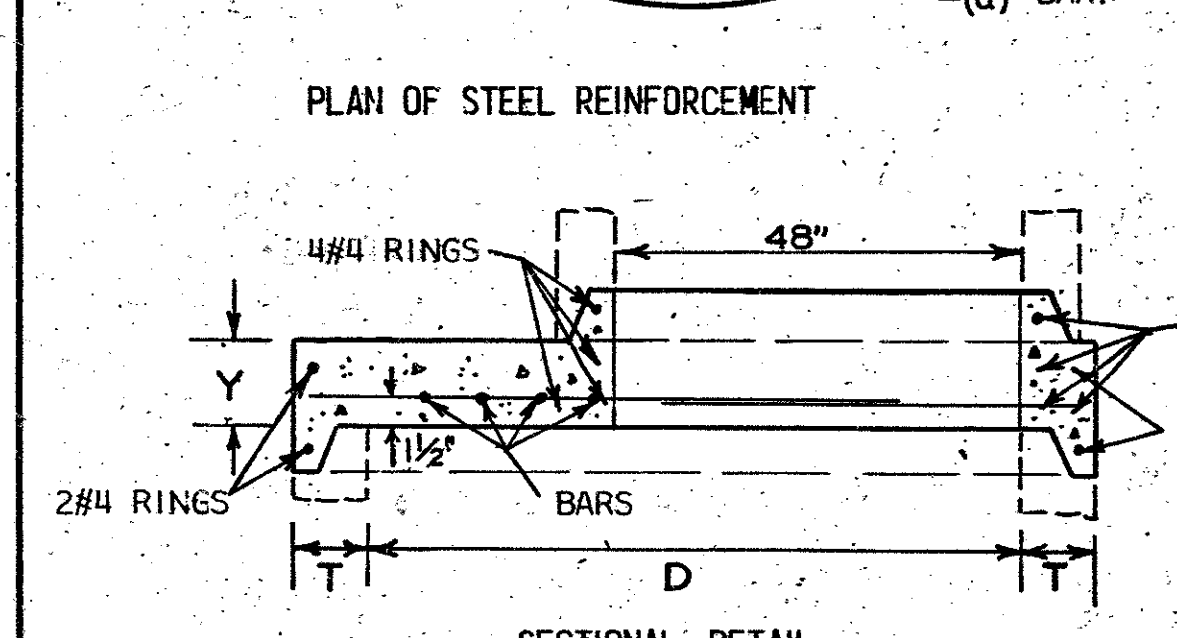


STEP SHALL BE OF TYPE APPROVED BY GA. D.O.T. OFFICE OF MATERIALS AND RESEARCH.

MIN. VERTICAL LOAD RESISTANCE = 400 LBS.
MIN. PULLOUT RESISTANCE = 700 LBS.

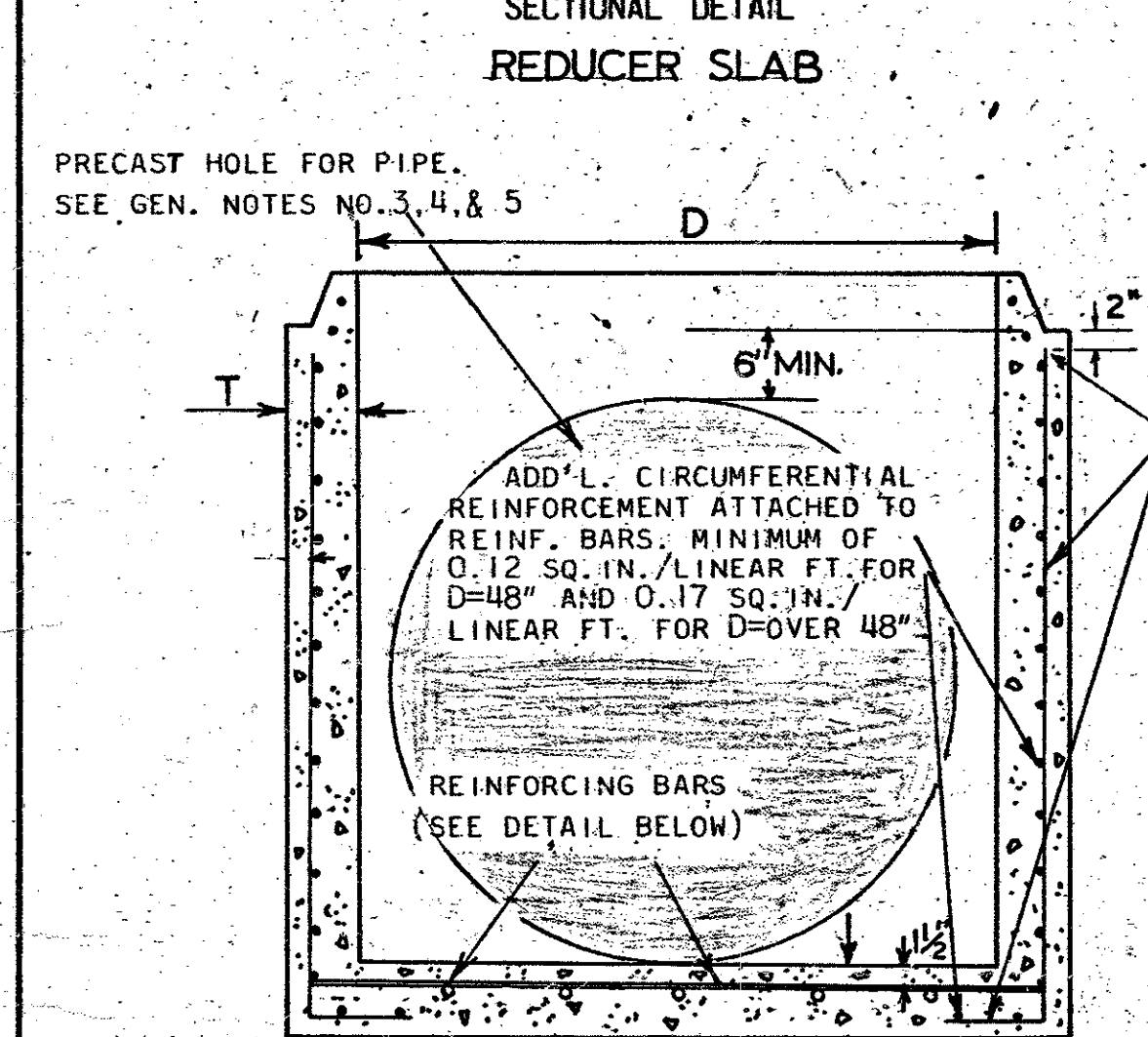
STEP DETAIL

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



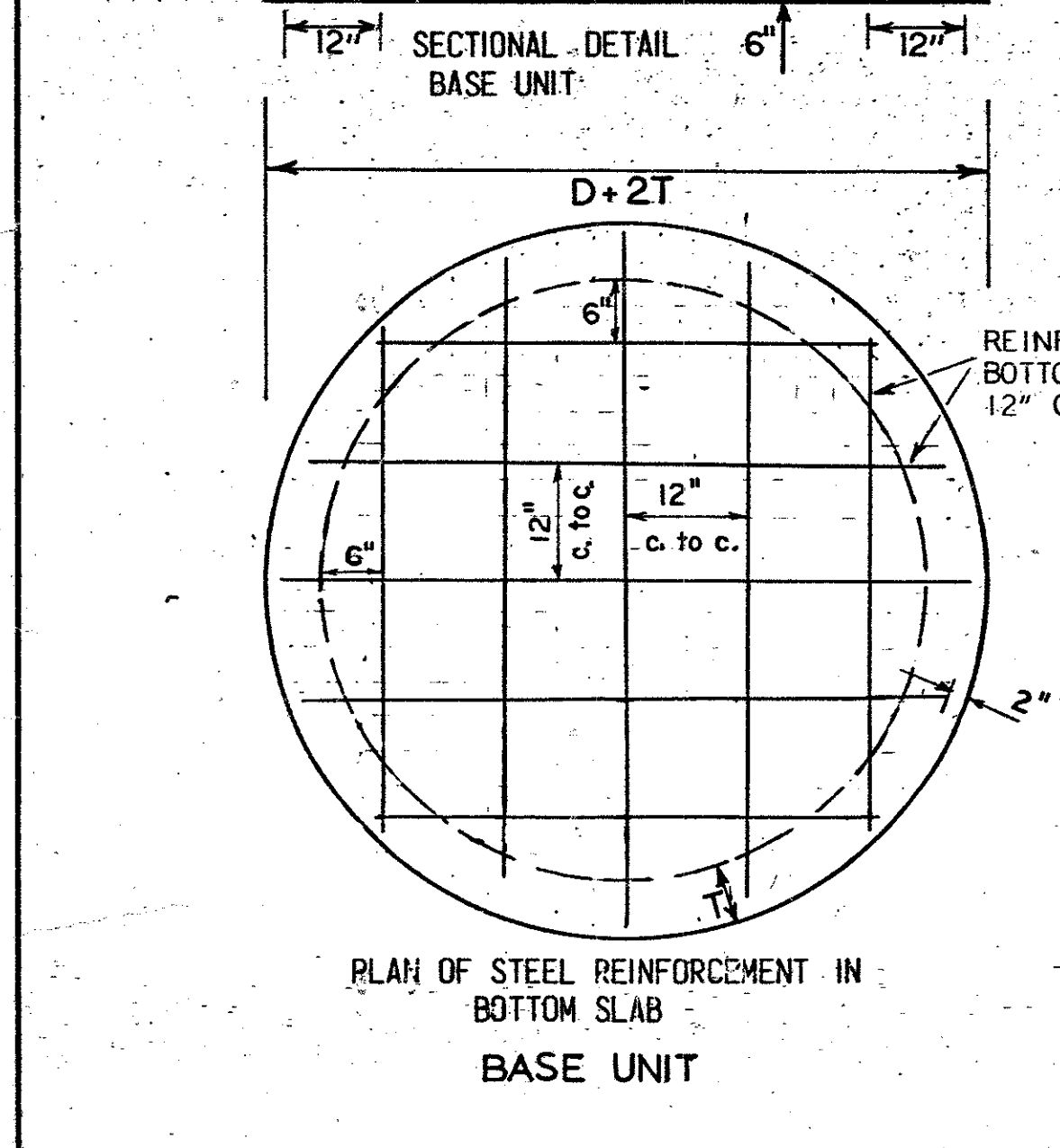
NOTE: 10 FT. MAXIMUM ALLOWANCE COVER ABOVE TOP OF REDUCER SLAB. REDUCER CONES TO BE USED WHERE REDUCER SLABS NOT PERMITTED.

D = INSIDE DIAMETER OF BASE UNIT



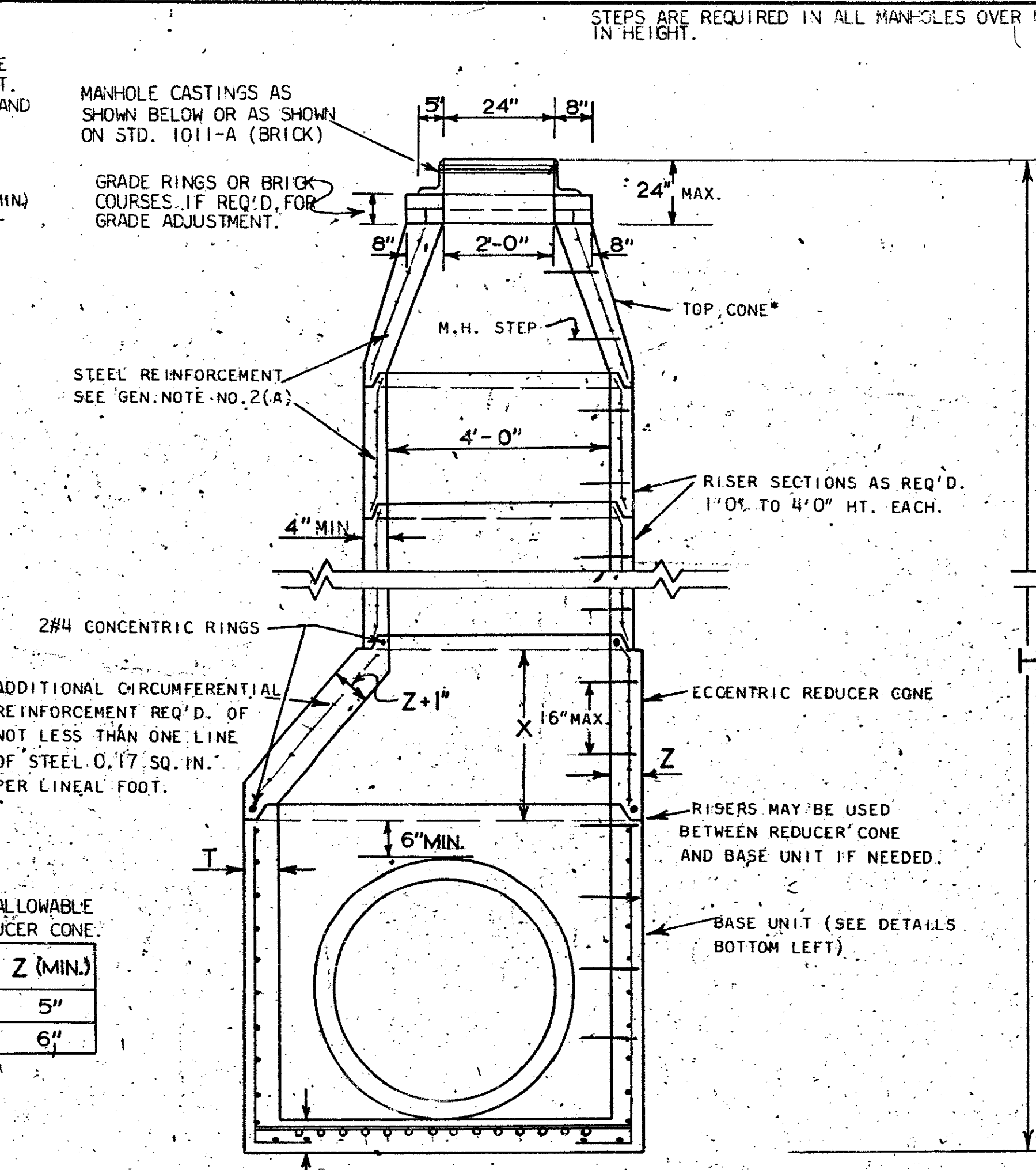
BASE UNIT SHALL CONTAIN IN ADDITION TO A.S.T.M. C-478 REINFORCEMENT, TWO NO. 5 VERTICAL BARS AT EACH OPENING EXTENDING FROM WITHIN 2\"/>

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

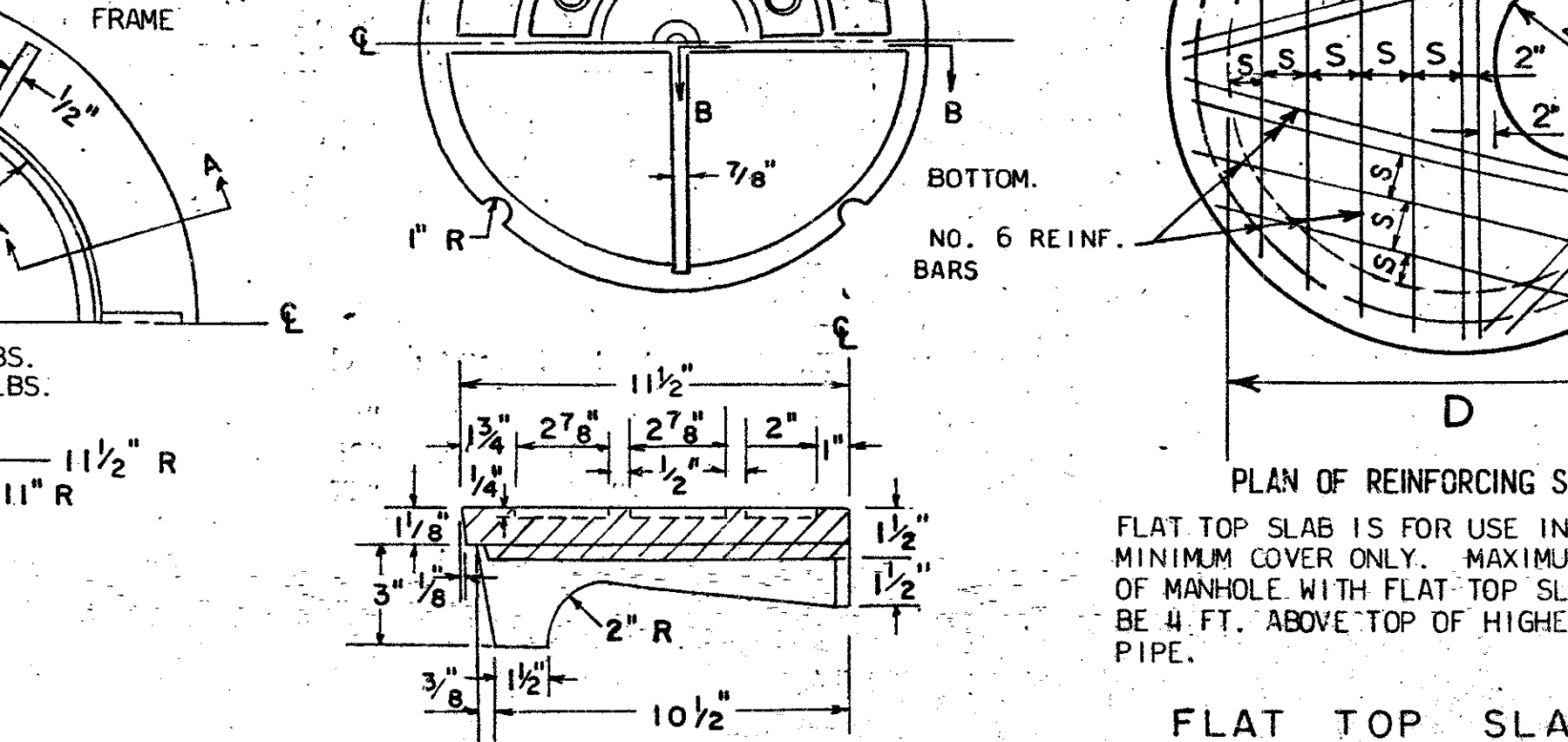
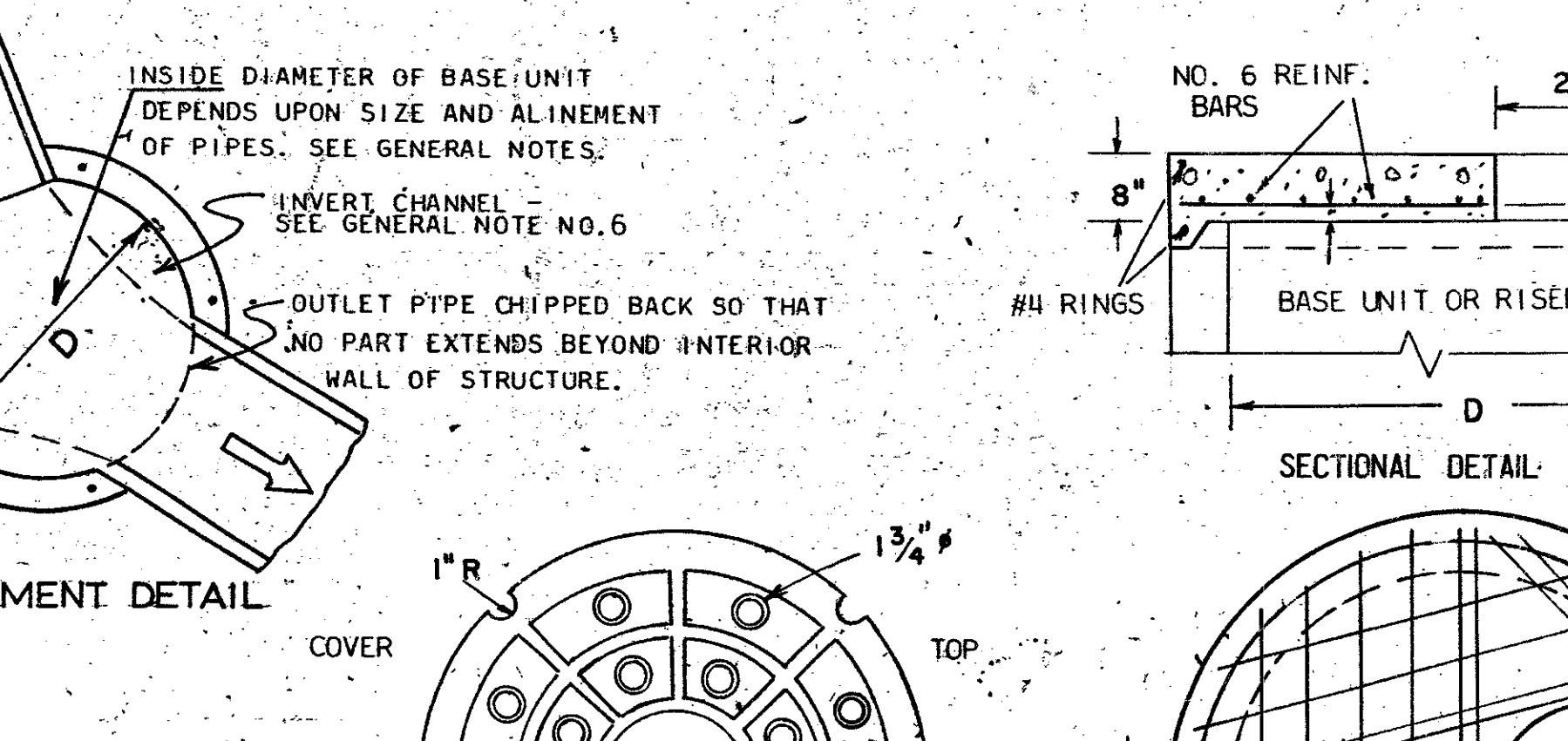


REINFORCING BARS IN TOP OF BOTTOM SLAB MAXIMUM SPACING 12\"/>

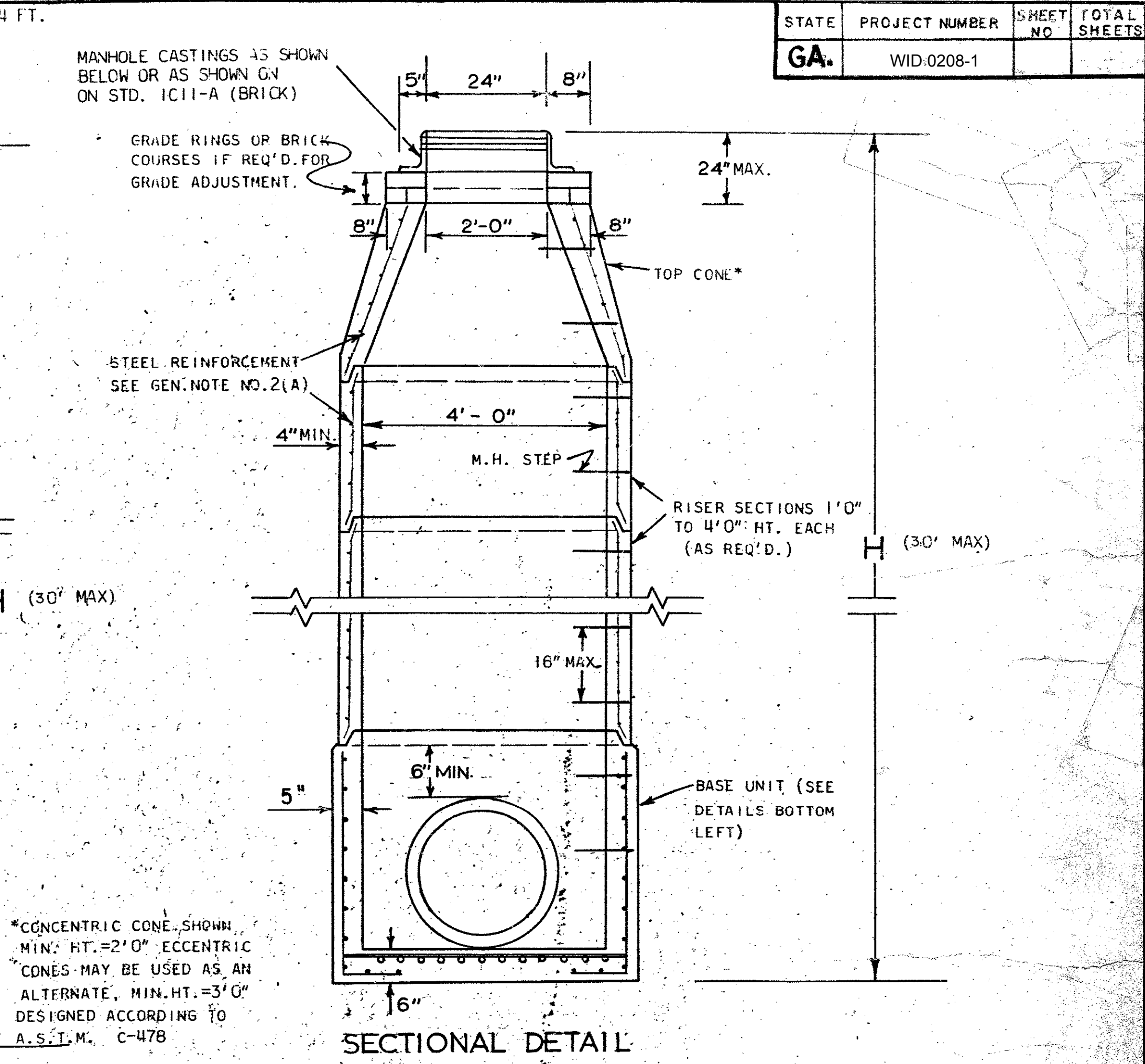
D	BAR SIZE
48"	#5
60"	#6
72"	#6



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



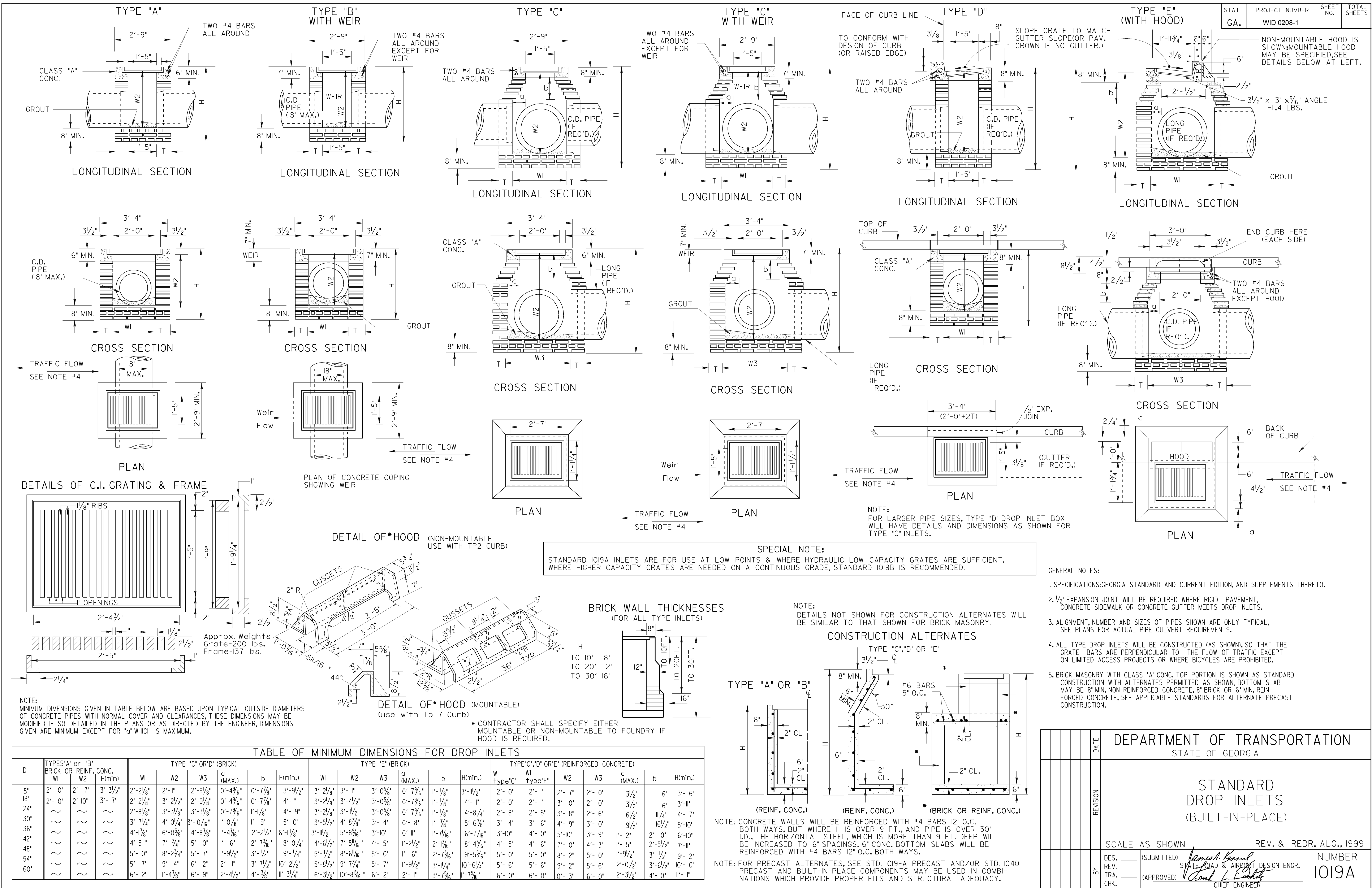
MANHOLE CASTINGS (C.I.)



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\"/>

DATE 6-1-75		REVISIONS		CASTINGS & BASE U.		BY		R M U	
<p>DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA</p> <p>STANDARD PRECAST REINFORCED CONCRETE MANHOLE</p> <p>NO SCALE</p> <p>DESIGNED: GCL DRAWN: RMU CHECKED: JEC</p> <p>SUBMITTED: J. J. Foster STATE ROAD DESIGN ENGINEER</p> <p>APPROVED: [Signature] STATE HIGHWAY ENGINEER</p> <p>NUMBER 1011-A PRECAST</p>									



STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	WID 0208-1		

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.

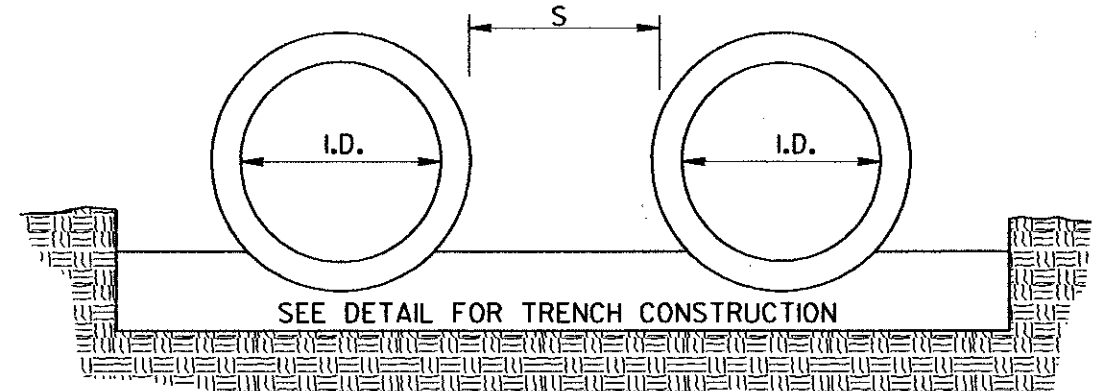
AFTER BACKFILL HAS BEEN COMPACTED, THE BALANCE OF THE FILL UP TO GRADE LINE SHALL BE CONSTRUCTED IN ACCORDANCE WITH EMBANKMENT SPECIFICATIONS

LONGITUDINAL SECTION OF IMPERFECT TRENCH BACKFILL AND BACKFILL METHODS

IMPERFECT BACKFILL

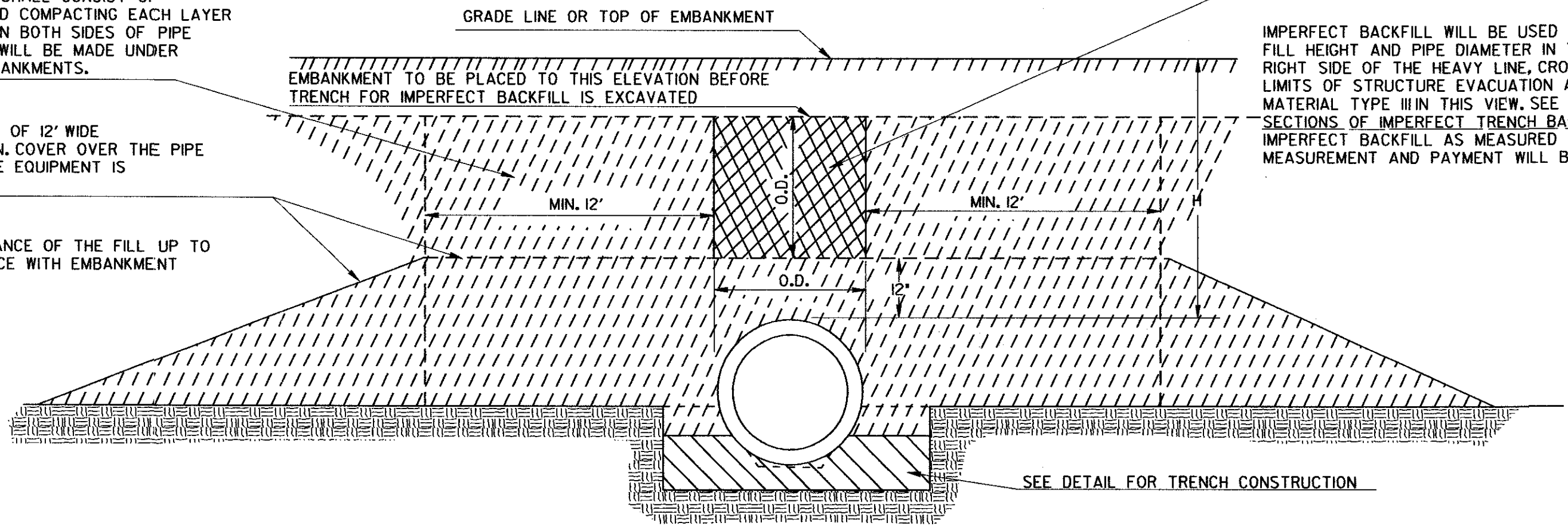
IMPERFECT BACKFILL WILL BE USED WITH CONCRETE PIPE IF FILL HEIGHT AND PIPE DIAMETER IN TABLE NO. 1 FALLS ON THE RIGHT SIDE OF THE HEAVY LINE. CROSS HATCHED AREA SHOWS LIMITS OF STRUCTURE EXCAVATION AND IMPERFECT BACKFILL MATERIAL TYPE III IN THIS VIEW. SEE DETAILS BELOW CROSS SECTIONS OF IMPERFECT TRENCH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



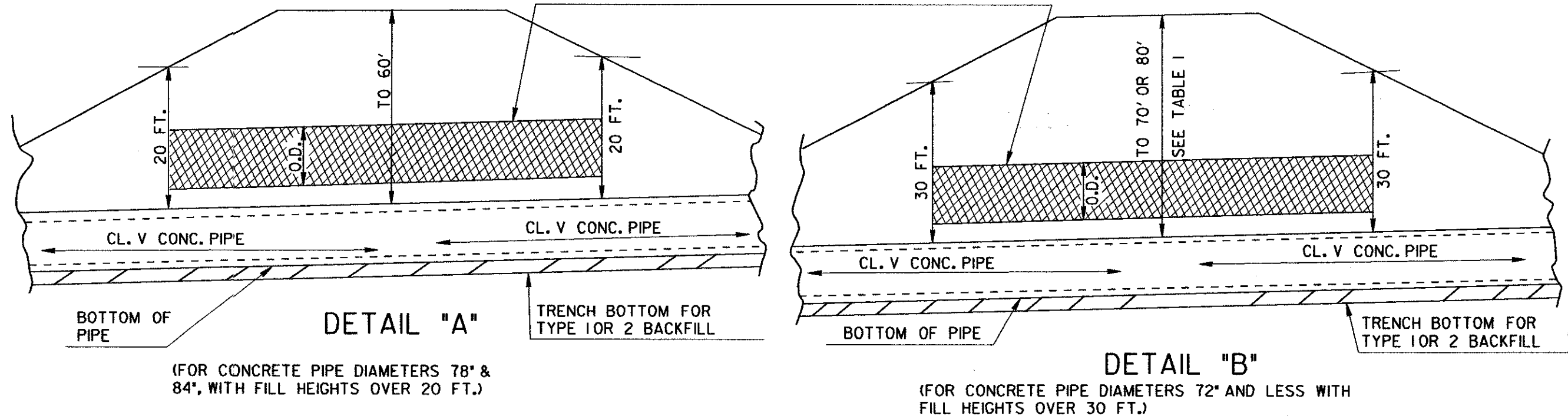
S=ONE INSIDE DIAMETER OF PIPE, OR 3 FEET, WHICHEVER IS SMALLER.
FOR PIPE ARCH CULVERTS, SUBSTITUTE SPAN FOR INSIDE DIAMETER.

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.

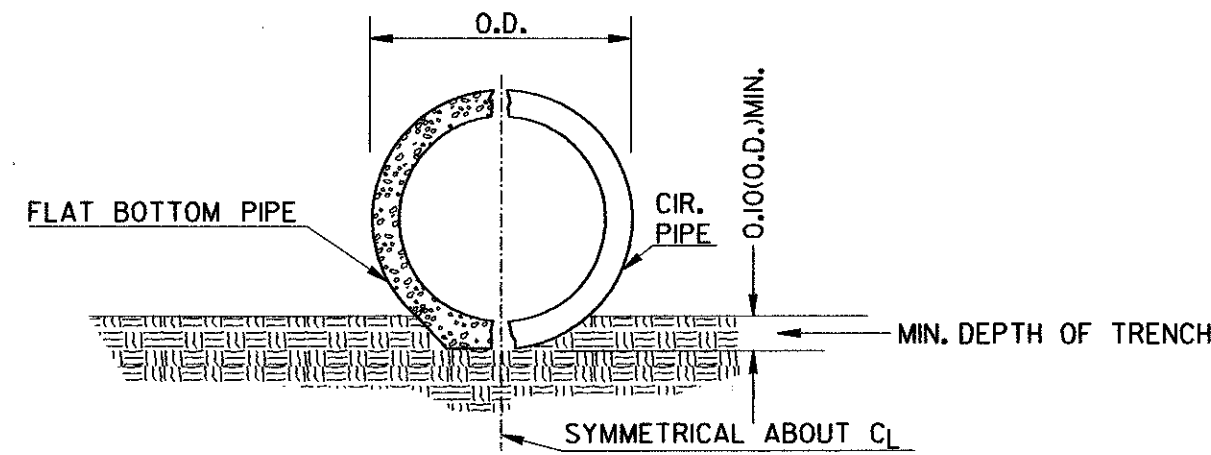


CROSS SECTIONS OF IMPERFECT TRENCH BACKFILL

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

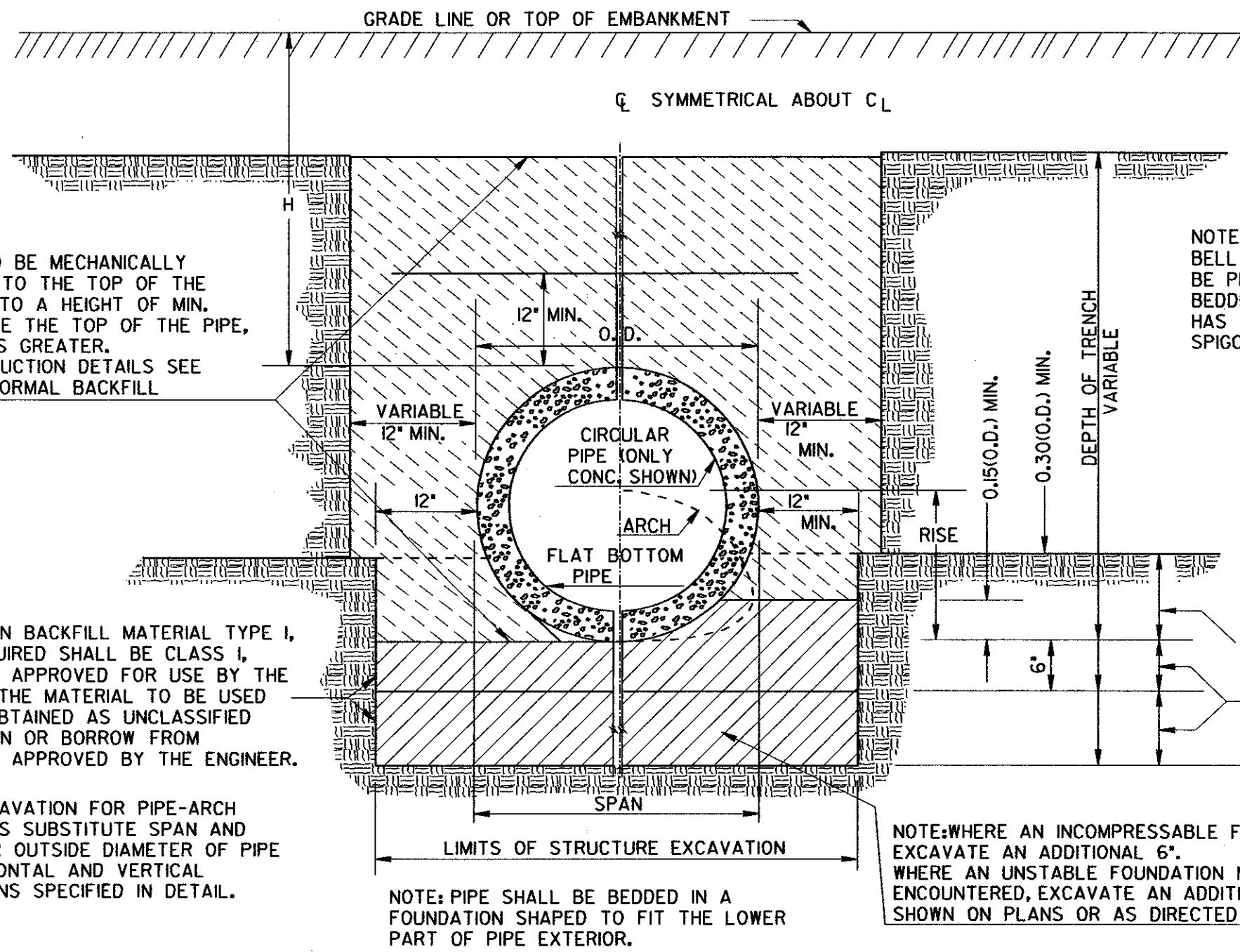


TRENCH CONSTRUCTION FOR SIDE DRAIN



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.

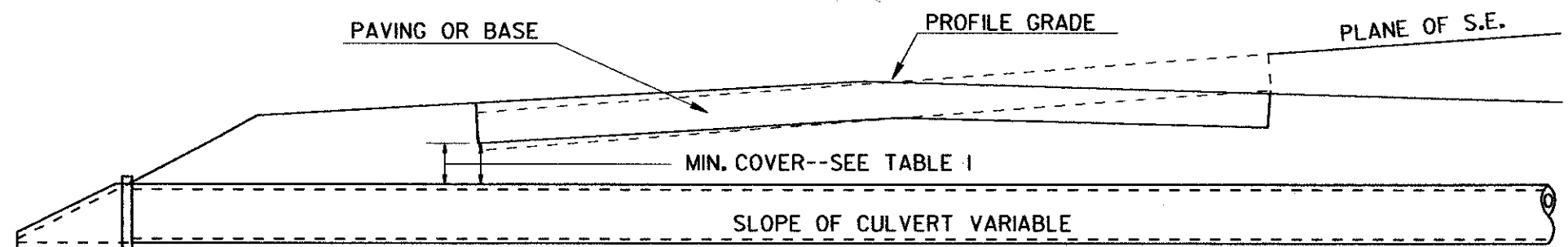
NOTE: PIPE SHALL BE BEDDED IN A FOUNDATION SHAPED TO FIT THE LOWER PART OF PIPE EXTERIOR.

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.

DATE		DEPARTMENT OF TRANSPORTATION	
		STATE OF GEORGIA	
REVISION		STANDARD	
		CONCRETE & METAL PIPE CULVERTS	
		SHEET 1 OF 3	
		(TRENCH CONSTRUCTION, BEDDING, BACKFILLING)	
NO SCALE		REV. & REDR.: SEPT., 2001	
DES. (SUBMITTED) <i>James A. Kinnel</i>		NUMBER	
DRW. (APPROVED) <i>James A. Kinnel</i>		1030D	
TRA. <i>James A. Kinnel</i>			
CHK. <i>James A. Kinnel</i>		CHIEF ENGINEER	

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		.0075
		.075		.0109
		.087		.0138
		.100		.0168
		.112		.0200
		.125		.0235
		.138		.0270
		.150		.0305
		.164		.0340
		.177		.0375
		.190		.0410
		.203		.0445
		.216		.0480
		.229		.0515
		.242		.0550
		.255		.0585
		.268		.0620
		.281		.0655
		.294		.0690
		.307		.0725
		.320		.0760
		.333		.0795
		.346		.0830
		.359		.0865
		.372		.0900
		.385		.0935
		.398		.0970
		.411		.1005
		.424		.1040
		.437		.1075
		.450		.1110
		.463		.1145
		.476		.1180
		.489		.1215
		.502		.1250
		.515		.1285
		.528		.1320
		.541		.1355
		.554		.1390
		.567		.1425
		.580		.1460
		.593		.1495
		.606		.1530
		.619		.1565
		.632		.1600
		.645		.1635
		.658		.1670
		.671		.1705
		.684		.1740
		.697		.1775
		.710		.1810
		.723		.1845
		.736		.1880
		.749		.1915
		.762		.1950
		.775		.1985
		.788		.2020
		.801		.2055
		.814		.2090
		.827		.2125
		.840		.2160
		.853		.2195
		.866		.2230
		.879		.2265
		.892		.2300
		.905		.2335
		.918		.2370
		.931		.2405
		.944		.2440
		.957		.2475
		.970		.2510
		.983		.2545
		.996		.2580
		1.009		.2615
		1.022		.2650
		1.035		.2685
		1.048		.2720
		1.061		.2755
		1.074		.2790
		1.087		.2825
		1.100		.2860
		1.113		.2895
		1.126		.2930
		1.139		.2965
		1.152		.3000
		1.165		.3035
		1.178		.3070
		1.191		.3105
		1.204		.3140
		1.217		.3175
		1.230		.3210
		1.243		.3245
		1.256		.3280
		1.269		.3315
		1.282		.3350
		1.295		.3385
		1.308		.3420
		1.321		.3455
		1.334		.3490
		1.347		.3525
		1.360		.3560
		1.373		.3595
		1.386		.3630
		1.399		.3665
		1.412		.3700
		1.425		.3735
		1.438		.3770
		1.451		.3805
		1.464		.3840
		1.477		.3875
		1.490		.3910
		1.503		.3945
		1.516		.3980
		1.529		.4015
		1.542		.4050
		1.555		.4085
		1.568		.4120
		1.581		.4155
		1.594		.4190
		1.607		.4225
		1.620		.4260
		1.633		.4295
		1.646		.4330
		1.659		.4365
		1.672		.4400
		1.685		.4435
		1.698		.4470
		1.711		.4505
		1.724		.4540
		1.737		.4575
		1.750		.4610
		1.763		.4645
		1.776		.4680
		1.789		.4715
		1.802		.4750
		1.815		.4785
		1.828		.4820
		1.841		.4855
		1.854		.4890
		1.867		.4925
		1.880		.4960
		1.893		.5000
		1.906		.5040
		1.919		.5080
		1.932		.5120
		1.945		.5160
		1.958		.5200
		1.971		.5240
		1.984		.5280
		1.997		.5320
		2.010		.5360
		2.023		.5400
		2.036		.5440
		2.049		.5480
		2.062		.5520
		2.075		.5560
		2.088		.5600
		2.101		.5640
		2.114		.5680
		2.127		.5720
		2.140		.5760
		2.153		.5800
		2.166		.5840
		2.179		.5880
		2.192		.5920
		2.205		.5960
		2.218		.6000
		2.231		.6040
		2.244		.6080
		2.257		.6120
		2.270		.6160
		2.283		.6200
		2.296		.6240
		2.309		.6280
		2.322		.6320
		2.335		.6360
		2.348		.6400
		2.361		.6440
		2.374		.6480
		2.387		.6520
		2.400		.6560
		2.413		.6600
		2.426		.6640
		2.439		.6680
		2.452		.6720
		2.465		.6760
		2.478		.6800
		2.491		.6840
		2.504		.6880
		2.517		.6920
		2.530		.6960
		2.543		.7000
		2.556		.7040
		2.569		.7080
		2.582		.7120
		2.595		.7160
		2.608		.7200
		2.621		.7240
		2.634		.7280
		2.647		.7320
		2.660		.7360
		2.673		.7400
		2.686		.7440
		2.699		.7480
		2.712		.7520
		2.725		.7560
		2.738		.7600
		2.751		.7640
		2.764		.7680
		2.777		.7720
		2.790		.7760
		2.803		.7800
		2.816		.7840
		2.829		.7880
		2.842		.7920
		2.855		.7960
		2.868		.8000
		2.881		.8040
		2.894		.8080
		2.907		.8120
		2.920		.8160
		2.933		.8200
		2.946		.8240
		2.959		.8280
		2.972		.8320
		2.985		.8360
		2.998		.8400
		3.011		.8440
		3.024		.8480
		3.037		.8520
		3.050		.8560
		3.063		.8600
		3.076		.8640
		3.089		.8680
		3.102		.8720
		3.115		.8760
		3.128		.8800
		3.141		.8840
		3.154		.8880
		3.167		.8920
		3.180		.8960
		3.193		.9000
		3.206		.9040
		3.219		.9080
		3.232		.9120
		3.245		.9160
		3.258		.9200
		3.271		.9240
		3.284		.9280
		3.297		.9320
		3.310		.9360
		3.323		.9400
		3.336		.9440
		3.349		.9480
		3.362		.9520
		3.375		.9560
		3.388		.9600
		3.401		.9640
		3.414		.9680
		3.427		.9720
		3.440		.9760
		3.453		.9800
		3.466		.9840
		3.479		.9880
		3.492		.9920
		3.505		.9960
		3.518		1.0000

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				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, $\bar{f}_y=24,000$ PSI.
IF ALUMINUM PIPE IS OTHERWISE FURNISHED AS 3004-H32 ($\bar{f}_y=20,000$ 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.		WID 0208-1									
		NOTE FOR TABLE NO. 2: COMBINATIONS FOR PIPE-ARCHES HAVING UNEQUAL PERIPHERY TO THAT SHOWN MAY BE SUBSTITUTED IF LISTED IN AASHTO SPECIFICATION.											
		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)		MIN. COVER (INCHES)		MAX. HT. FILL (FEET)	
								COR. STEEL		COR. ALUMINUM			
								①		②			
		15		17		13		.064		.060		13	
		18		21		15		.064		.060		15	
		21		24		18		.064		.060		12	
		24		28		20		.064		.060		14	
		30		35		24		.064		.075		16	
		36		42		29		.064		.075		13	
				40		31		.079		.105		9	
		42		49		33		.079		.105		7	
		48		57		38		.109		.135		12	
		54		64		43		.109		.135		7	
		60		71		47		.138		.164		12	
		66		77		52		.168		.079		7	
		77		83		57		.168		.079		15	
		78		87		63		.079		.079		8	
		84		95		67		.109		.109		14	
		90		103		71		.109		.109		12	

		DESIGNED		(SUBMITTED)		NUMBER	
		TRACED		STATE ROAD		10300	
		CHECKED		(APPROVED)			
		REVISED		CHIEF ENGINEER			

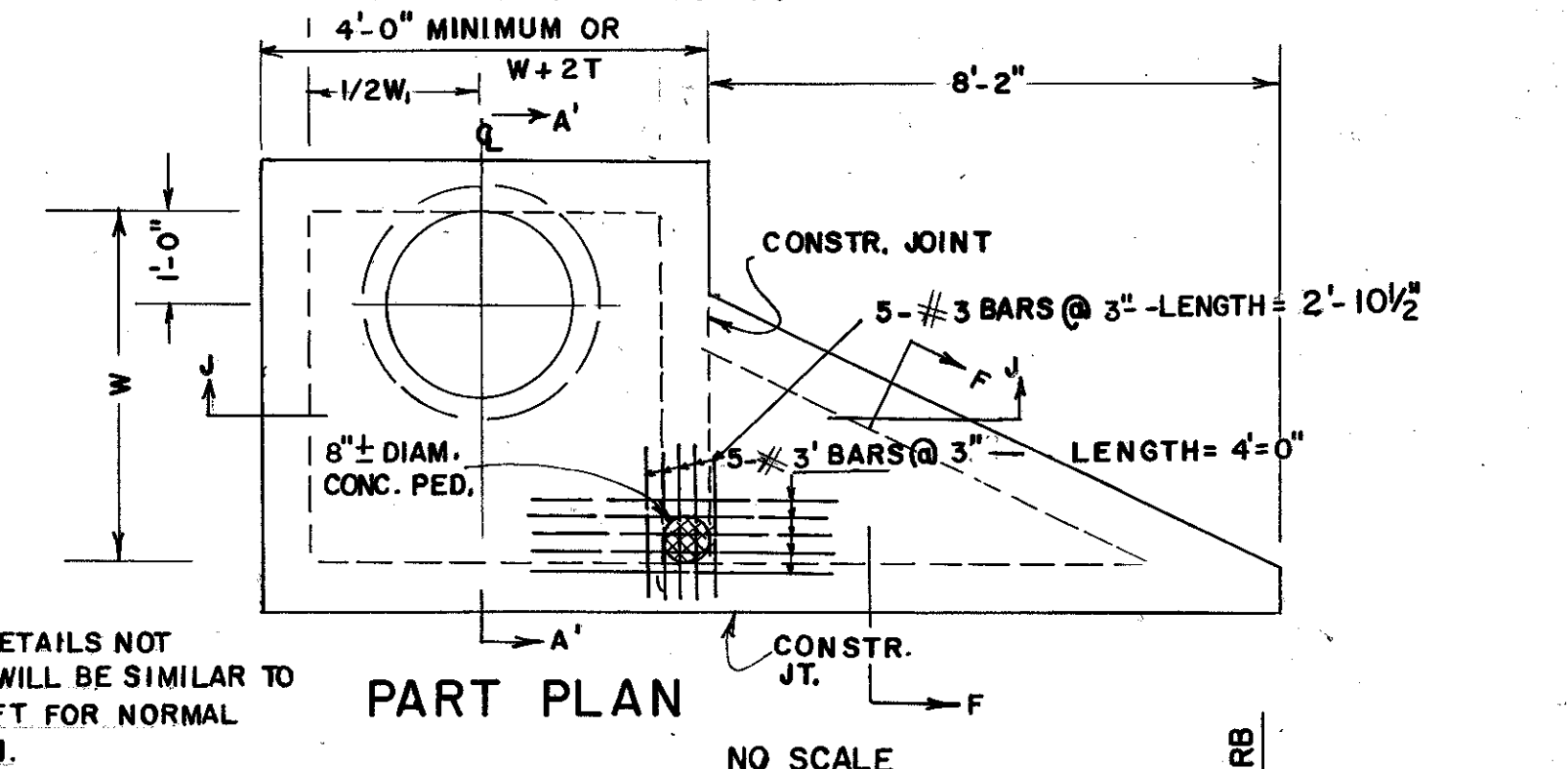
DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
STANDARD
CONCRETE & METAL PIPE CULVERTS
SHEET 3 OF 3
(FILL HEIGHTS FOR SPIRAL RIB METAL PIPE & FOR PIPE ARCH)
NO SCALE
SEPT., 2001

James A. Kennel
STATE ROAD DESIGN ENGINEER

Chief Engineer

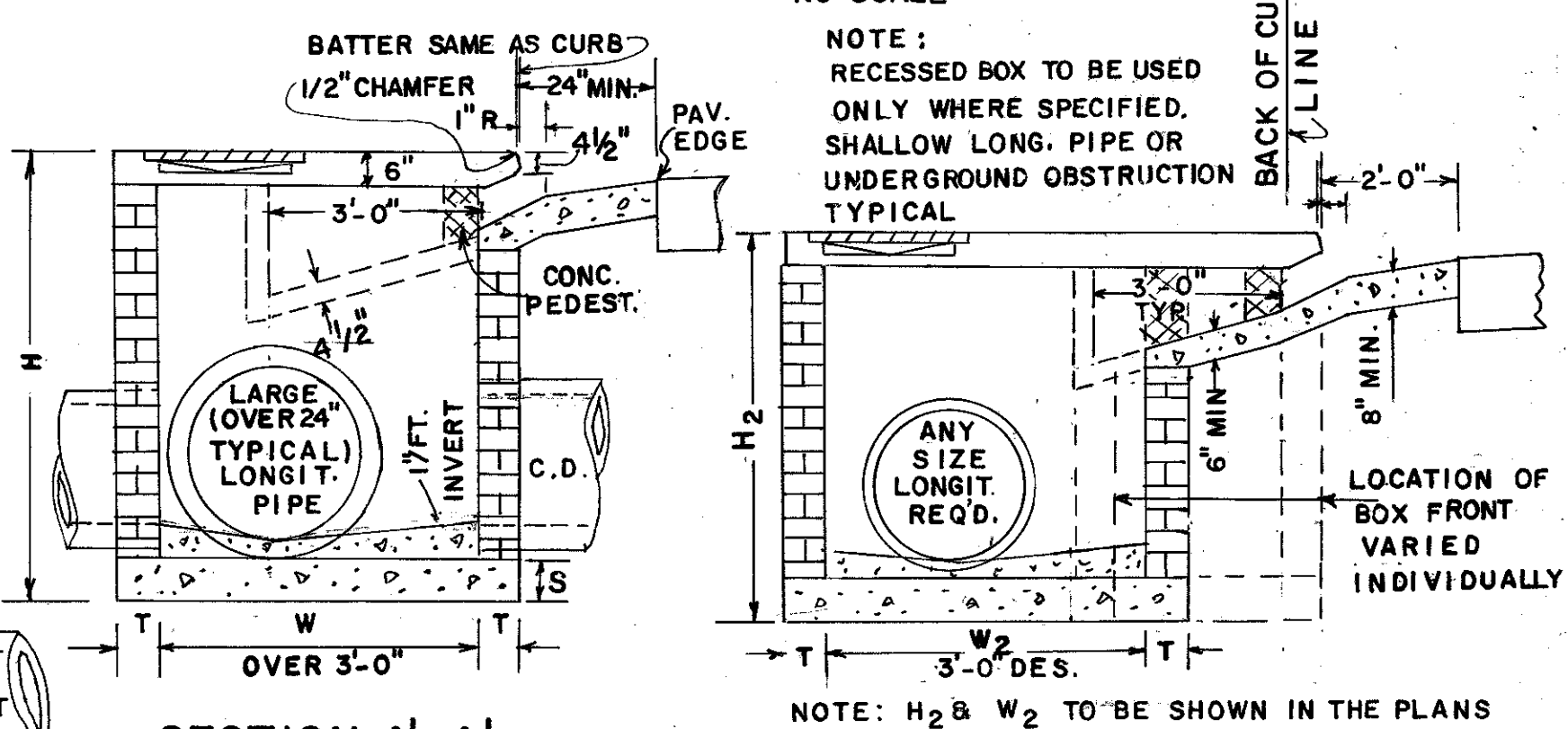
(TYPICAL FOR CATCH BASIN WITH LARGE LONGITUDINAL PIPE OR RECESSED BOX)

CATCH BASIN - (WITH PROTRUDED BACK)

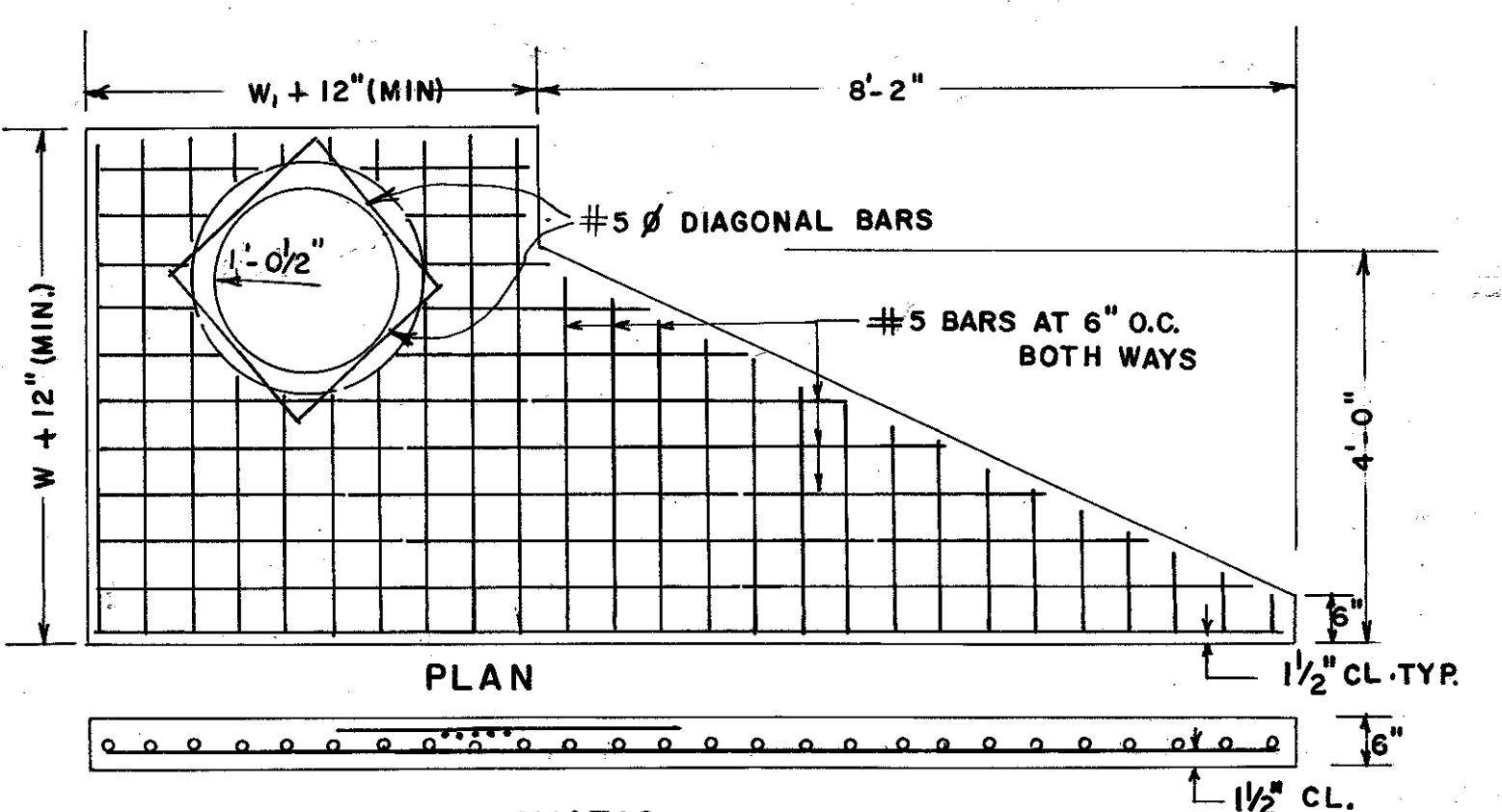


NOTE: TOP SLAB MAY BE CAST IN PLACE OR PRECAST, IF SLAB IS CAST IN PLACE, BUILDERS PAPER IS TO BE PLACED BETWEEN THE CATCH BASIN AND TOP SLAB.

PART PLAN

[illegible]

DETAIL OF TOP REINFORCED CONCRETE SLAB



3/4" ϕ STEEL LADDER BAR

8"

3/4"

3/4"

SCALE 1" = 1'

DETAIL OF LADDER BARS

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

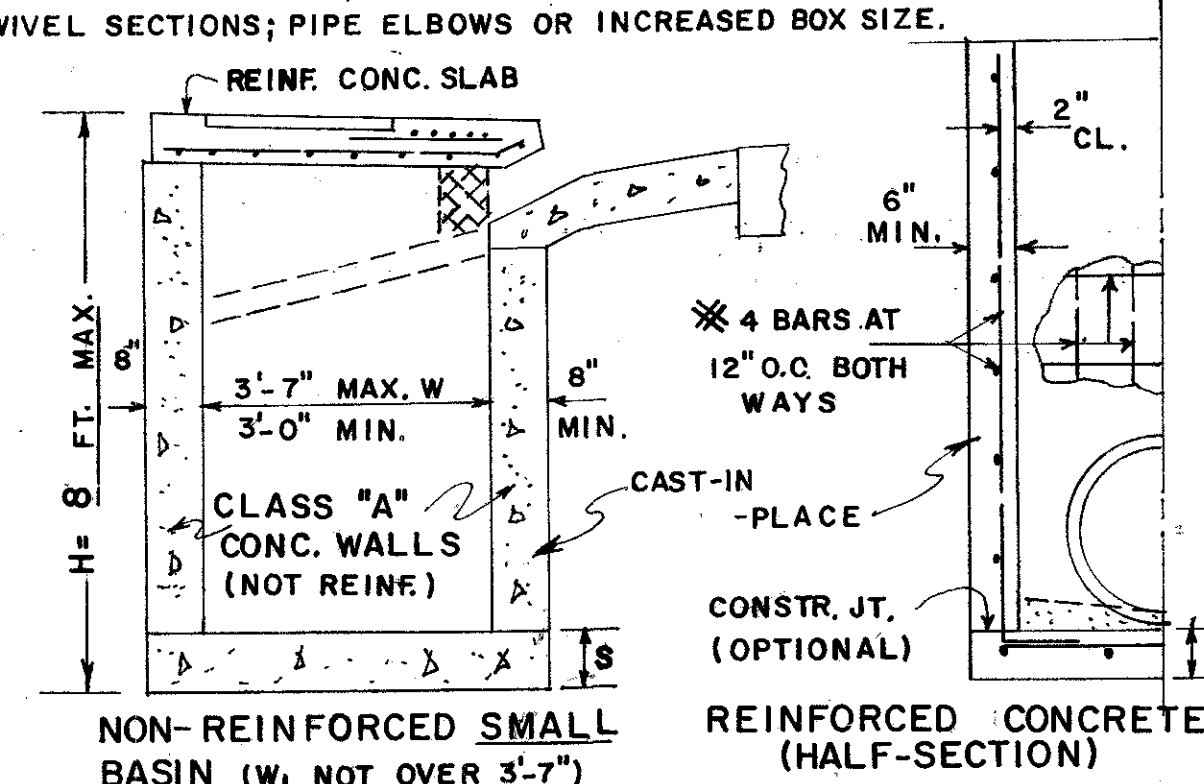
ARRANGEMENT OF LADDER BARS

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

NOTE:
THE MIN. R & 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.

PRECAST BOX ON BRICK
(HALF - SECTION)

NOTE: (HALF-SECTION)
TYPICAL TREATMENT FOR SKEWED PIPE ARE: CIRCULAR PRECAST
SWIVEL SECTIONS; PIPE ELBOWS OR INCREASED BOX SIZE.



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

SEE SEPARATE STANDARDS FOR PRECAST ALTERNATES.

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

STATE OF GEORGIA.

STANDARD CATCH BASINS

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

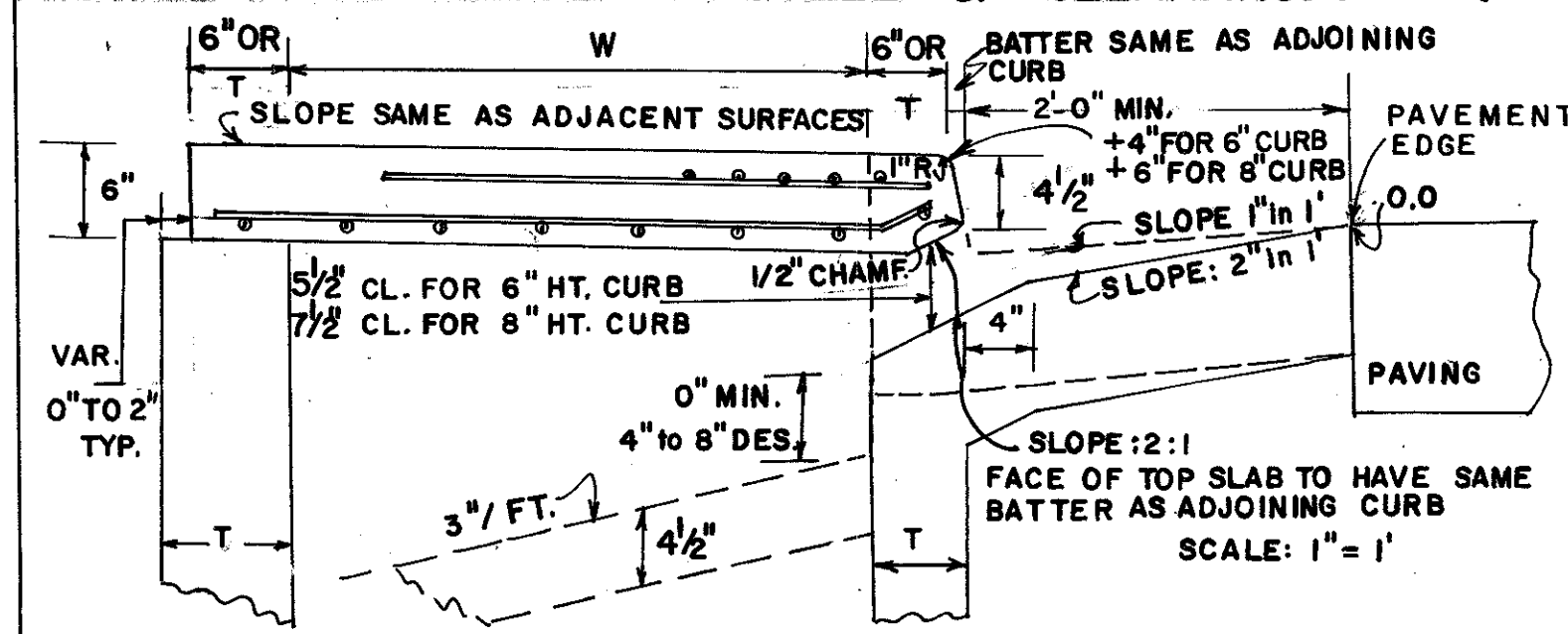
SCALE AS SHOWN

RED. & REDR. AUGUST, 1982

REV. 8	(SUBMITTED) <i>Flord E. Hardy</i>
REDR. <u>R.M.U.</u>	STATE ROAD & AIRPORT DESIGN ENGR.
TRA. <u>G.M.E.</u>	(APPROVED) <i>Thomas D. ...</i>
CHK. <u>RKC</u>	STATE HIGHWAY ENGINEER

NUMBER
033 D

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



3° TO 7° DRAFTS TYP.

3 3/4"

1-0" R

1 1/2"

3/4"

I. RING

APPROX. WT. = 78 LBS.

PLAN

1 1/8" R

7 1/2" R

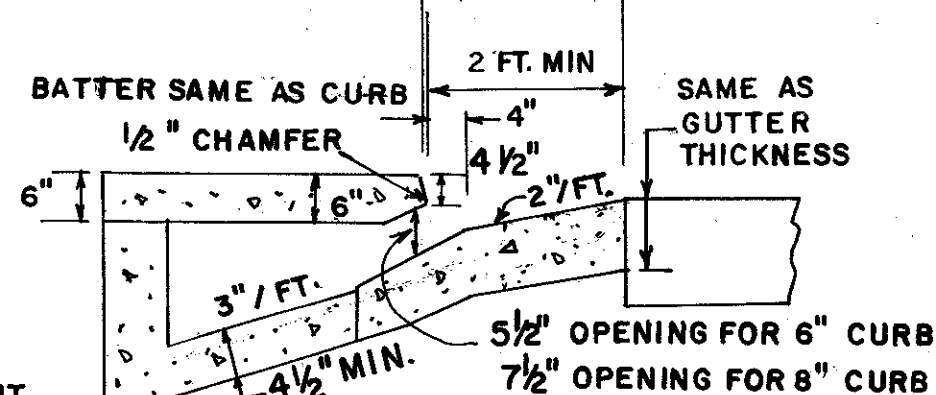
3/4" H

C.I. COVER

APPROX. WT. = 63 LBS.

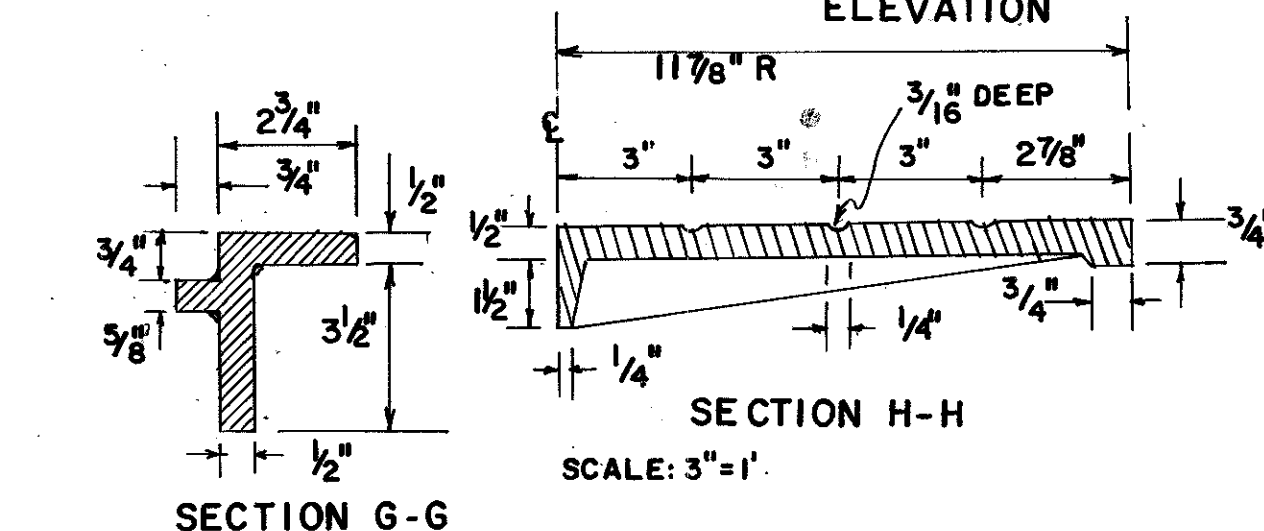
4-1" Ø HOLES EQUALLY SPACED

5/16"



SCALE: 1" = 1' 1/2"

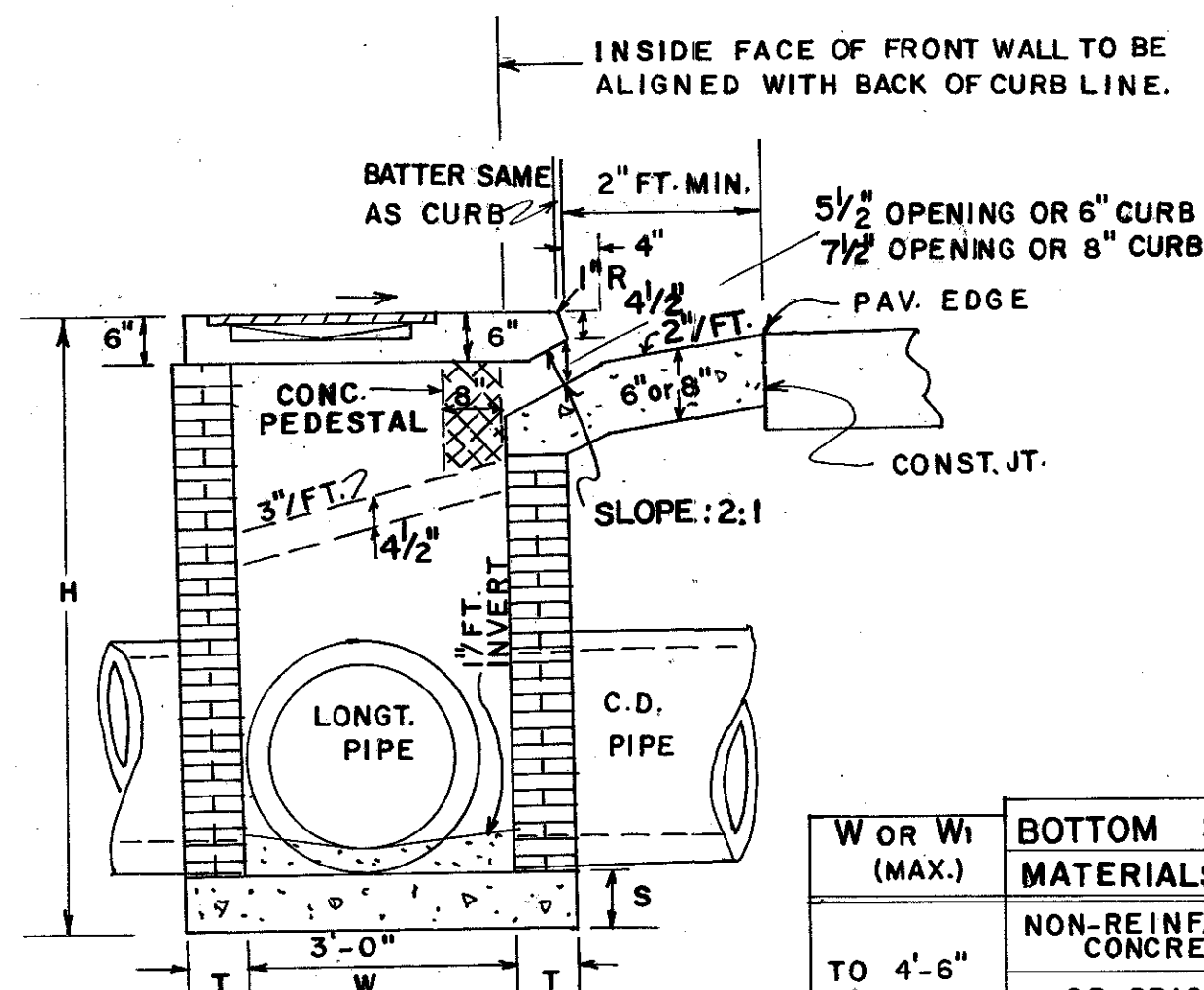
ELEVATION



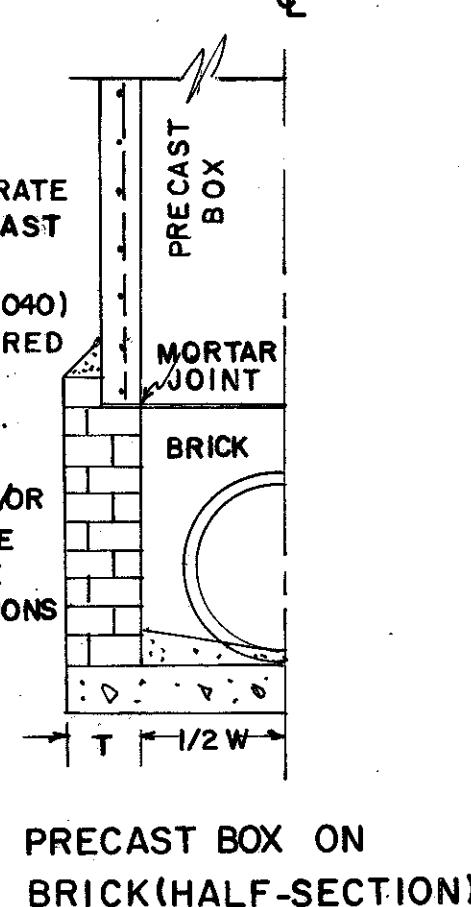
DETAILS NOT SHOWN
HERE ARE SIMILAR
TO THOSE FOR NORMAL
CATCH BASINS, PAYMENT
FOR CATCH BASIN
INCLUDES ALL
QUANTITIES FROM
PT. 1 TO PT. 2.

RT. 1/2
FLOW
PAYLINE FOR BASIN
PAYLINE FOR BASIN
THREE PEDESTAL
REQUIRED

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



**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**



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/ 4 BARS 12" O.C. BOTH WAYS 2" CL. FROM SLAB TOP	8"

3/4" ϕ STEEL LADDER BAR

Top View: U-shaped bar with a width of 8" and a thickness of 3/4".


Side View: Bar with a height of 1'-0" (12").

End View: Bar with a width of 2" and a thickness of 2".

SCALE: 1" = 1'

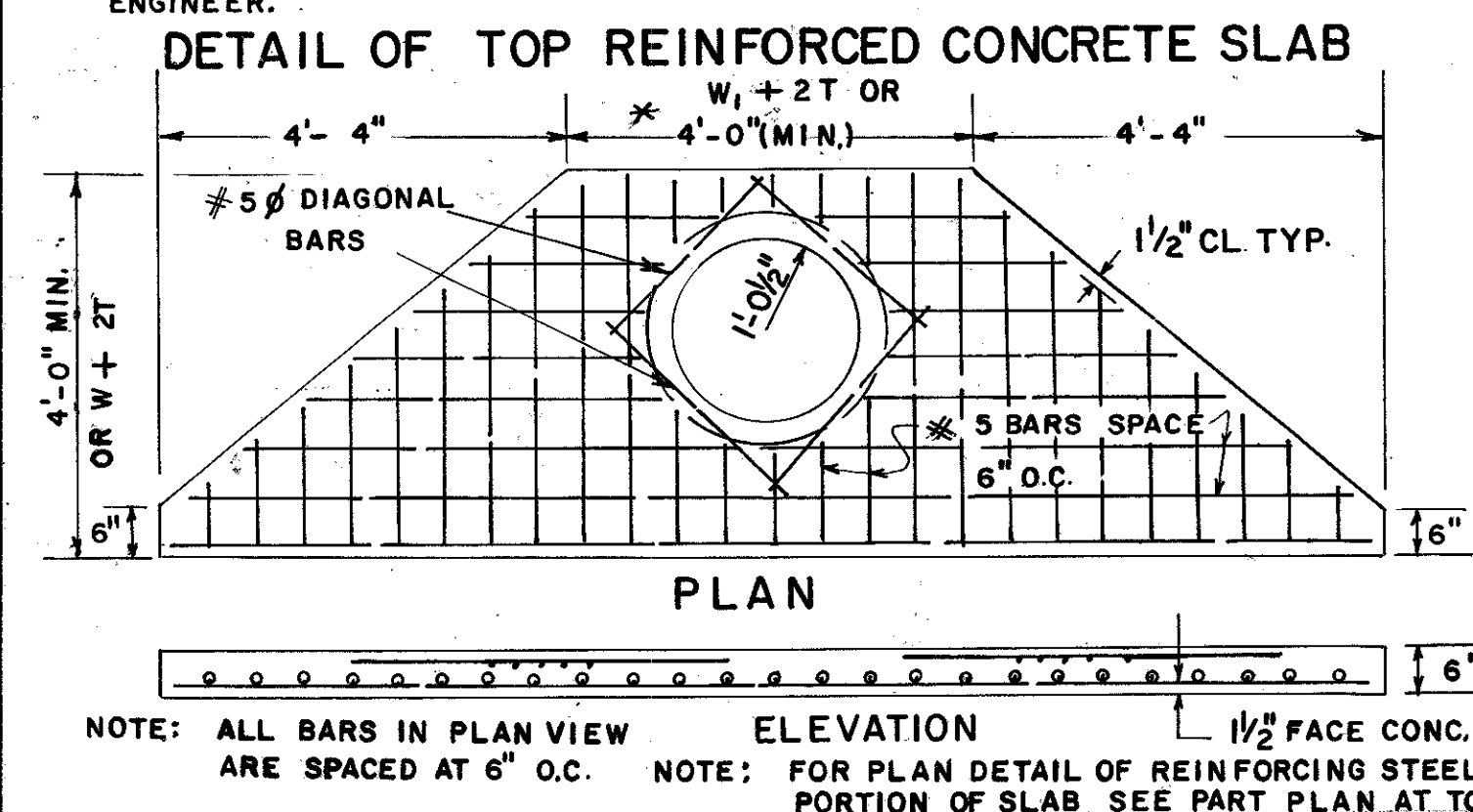
STEPS LISTED IN GA. LABORATORY'S QUALIFIED PRODUCTS LIST MAY BE

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

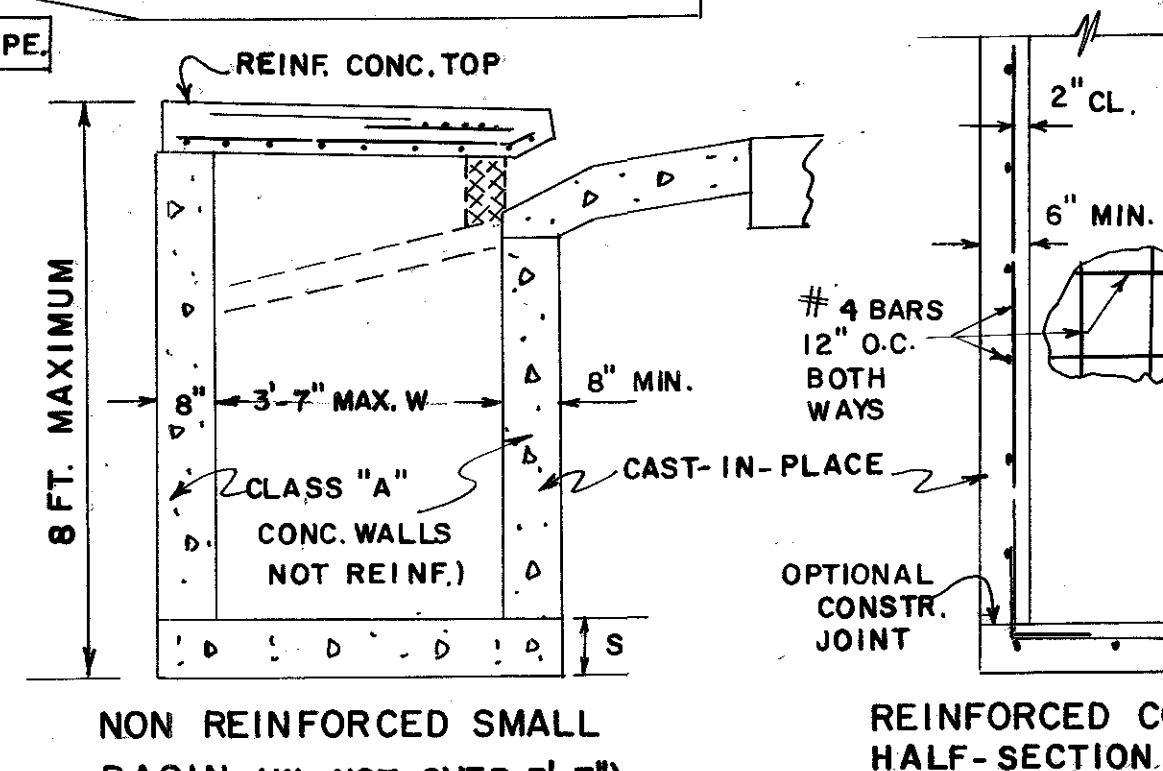


ALL CATCH BASINS WILL HAVE STEPS OR
LADDER BARS. NUMBER & LOCATION TO BE
AS DIRECTED BY THE ENGINEER.

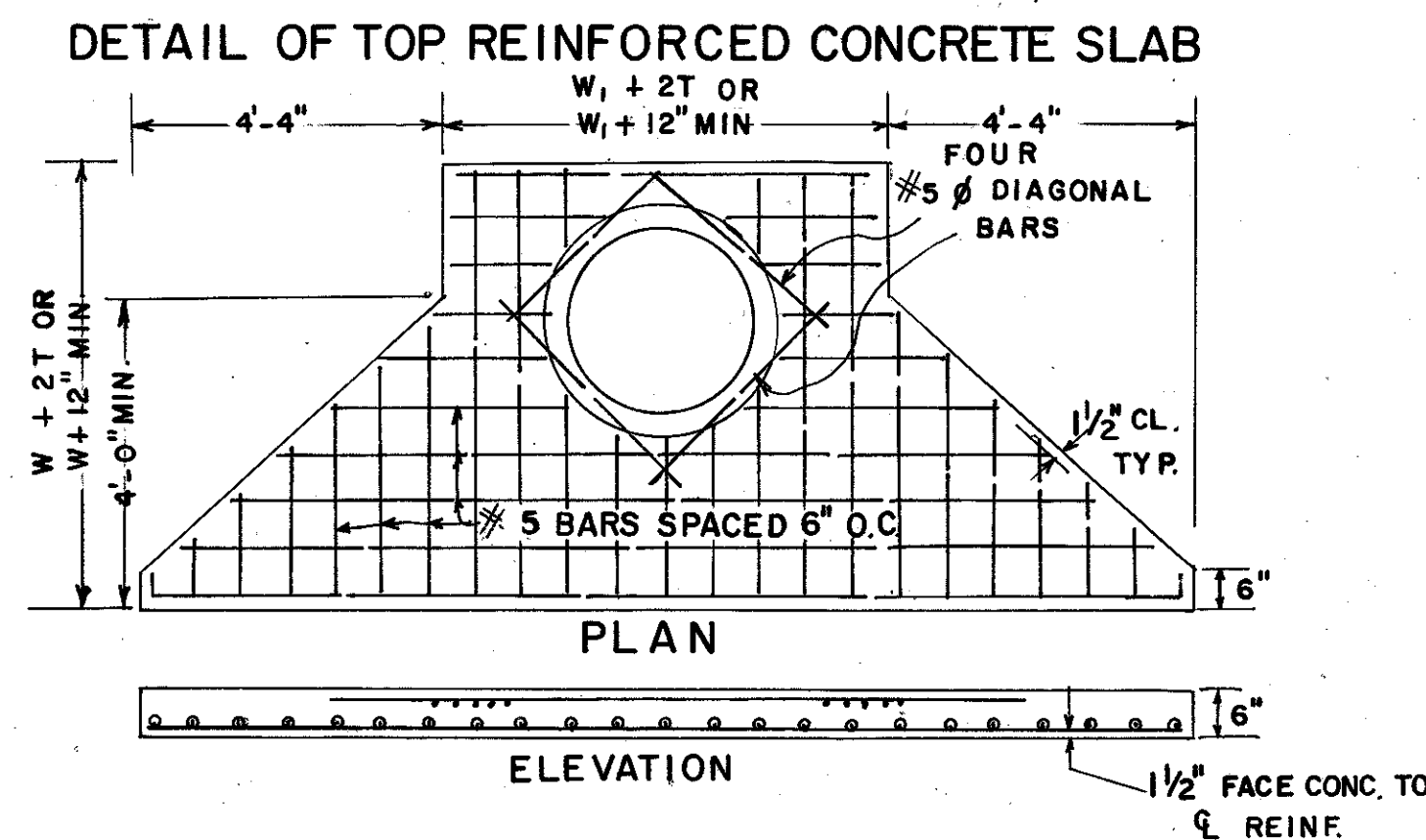
NOTE: THE MIN. H & MIN. ΔE GIVEN IN ABOVE TABLE ARE BASED UPON TYPICAL OUTSIDE DIAMETERS OF CONC. PIPE AND MAY BE VARIED, IF CONDITIONS PERMIT WITH VARIED DIMENSIONS SPECIFIED IN THE PLANS OR DIRECTED BY THE ENGINEER. W & W DIMENSIONS DO NOT HAVE TO BE EQUAL.



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.



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

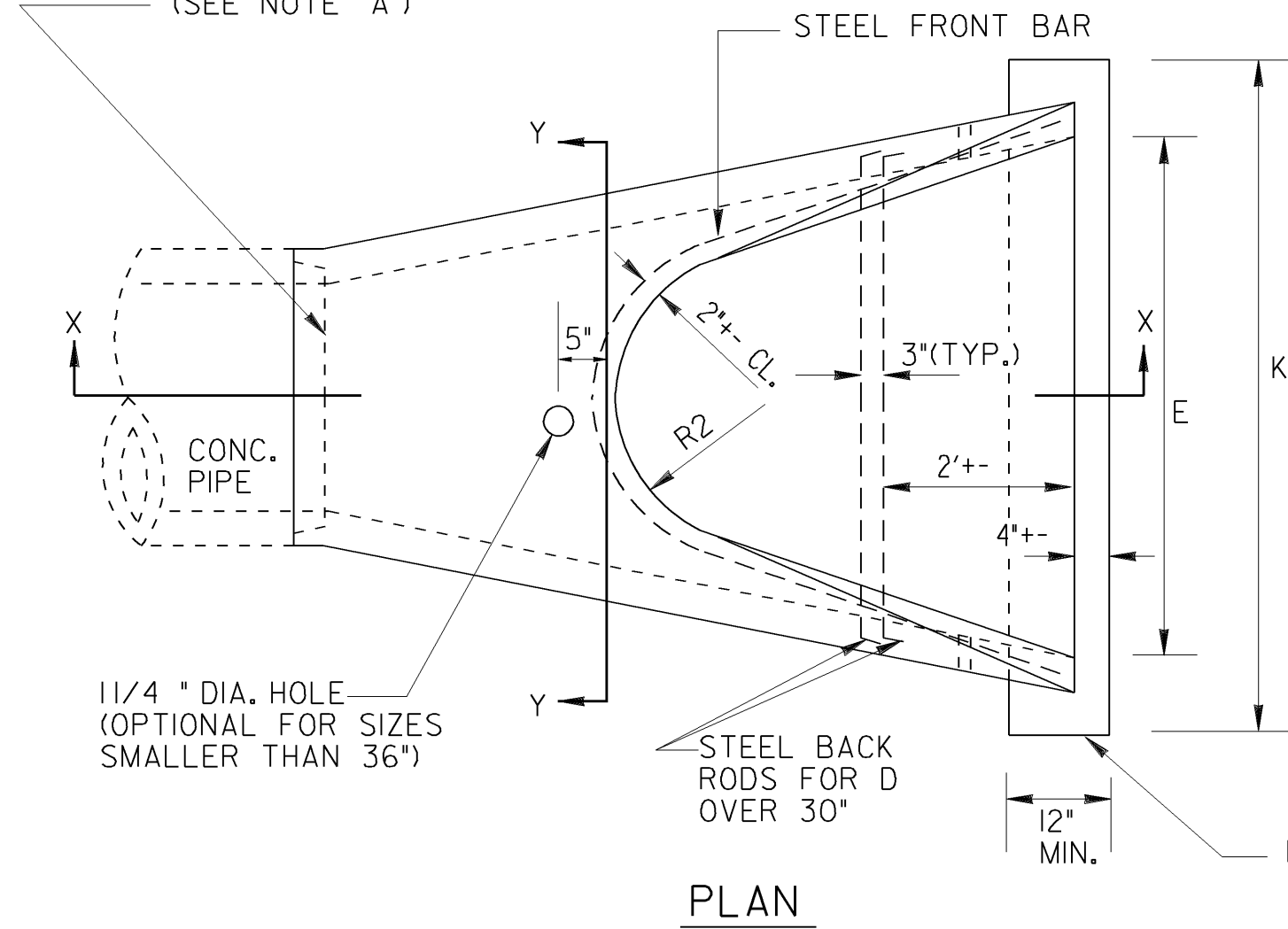


NOTE:

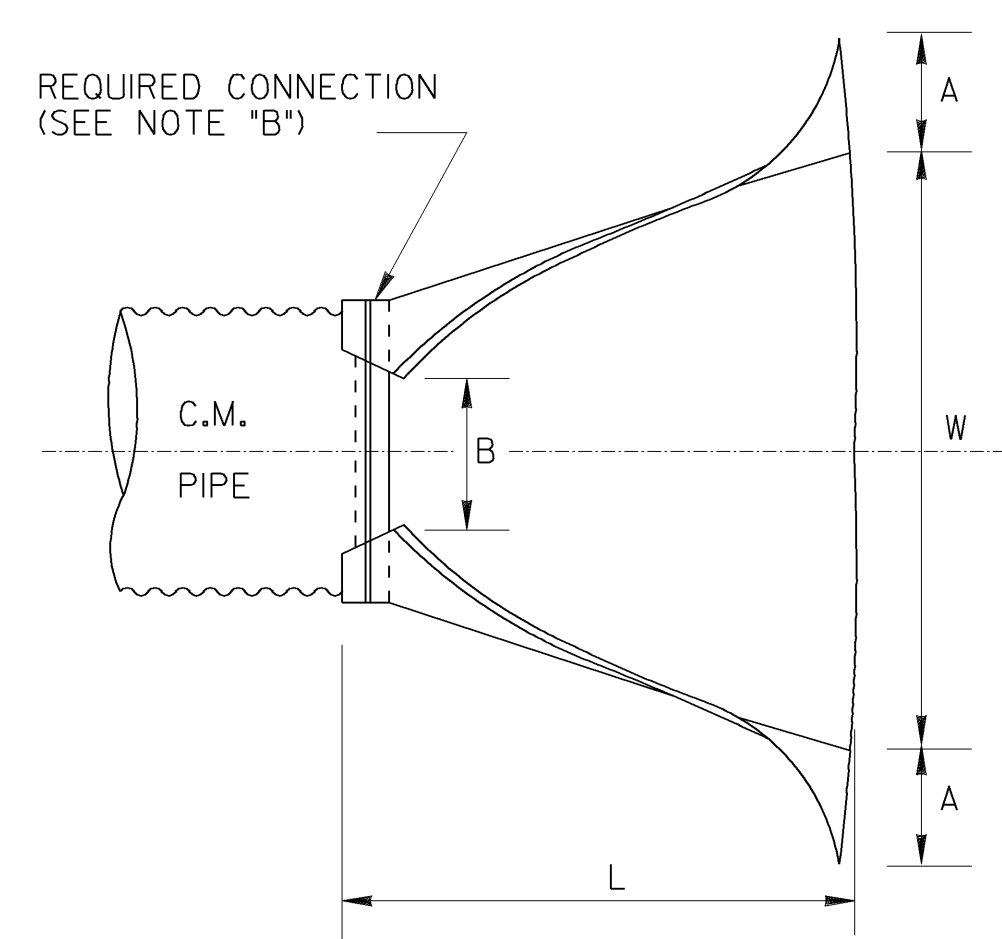
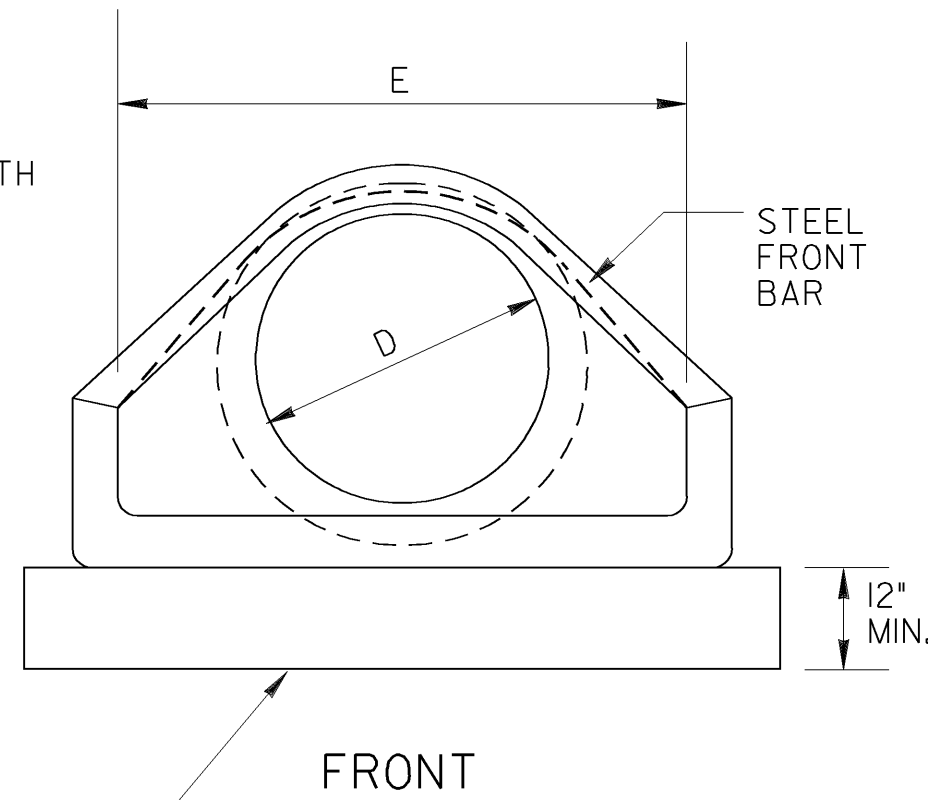
TYPICAL TREATMENT FOR SKEWED PIPES ARE: CIRCULAR PRECAST UNITS;
PRECAST SWIVEL SECTIONS; PIPE ELBOWS OR INCREASED BOX SIZES TO
ACCOMMODATE THE SKEWS.

SEE SEPARATE STANDARDS FOR PRECAST ALTERNATES.

		<p align="center">DEPARTMENT OF TRANSPORTATION</p> <p align="center">STATE OF GEORGIA</p>	
		<p align="center">STANDARD</p> <p align="center">CATCH BASINS</p> <p align="center">FOR USE WITH CURB (6" OR 8" HT.) & GUTTER (IN SAGS OR LOW POINTS)</p>	
		<p>SCALE AS SHOWN</p>	<p>REV. & RED. AUGUST, 1962</p>
<p>REV. & RED. R.M.U.</p>	<p>(SUBMITTED) <i>Floyd E. Hardy</i></p> <p>STATE ROAD & AIRPORT DESIGN ENGR.</p>	<p>NUMBER</p>	
<p>TRA. G.M.E. CHK. R.K.C.</p>	<p>(APPROVED) <i>Thomas D. McElroy</i></p> <p>STATE HIGHWAY ENGINEER</p>	<p>1034D</p>	



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

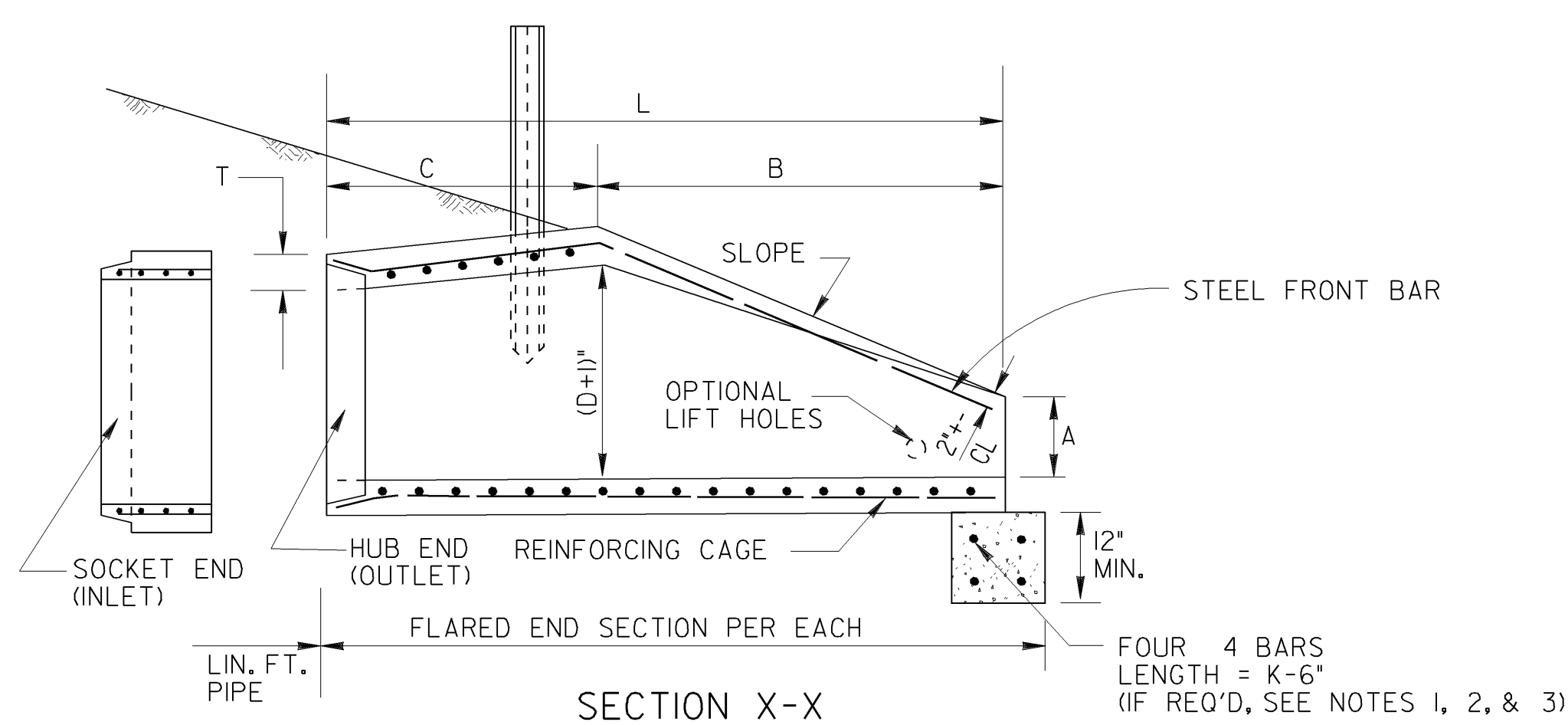


NOTE: GALVANIZED STEEL FLARED END SECTIONS ARE TO BE USED ONLY WITH CORRUGATED STEEL PIPE AND ALUMINUM FLARED END SECTIONS ARE TO BE USED ONLY WITH CORRUGATED ALUMINUM PIPE UNLESS OTHERWISE APPROVED BY D.O.T. OFFICE OF MATERIALS AND TESTS.

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

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

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



REINFORCING CAGE:

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

NOTE 'A':

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

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

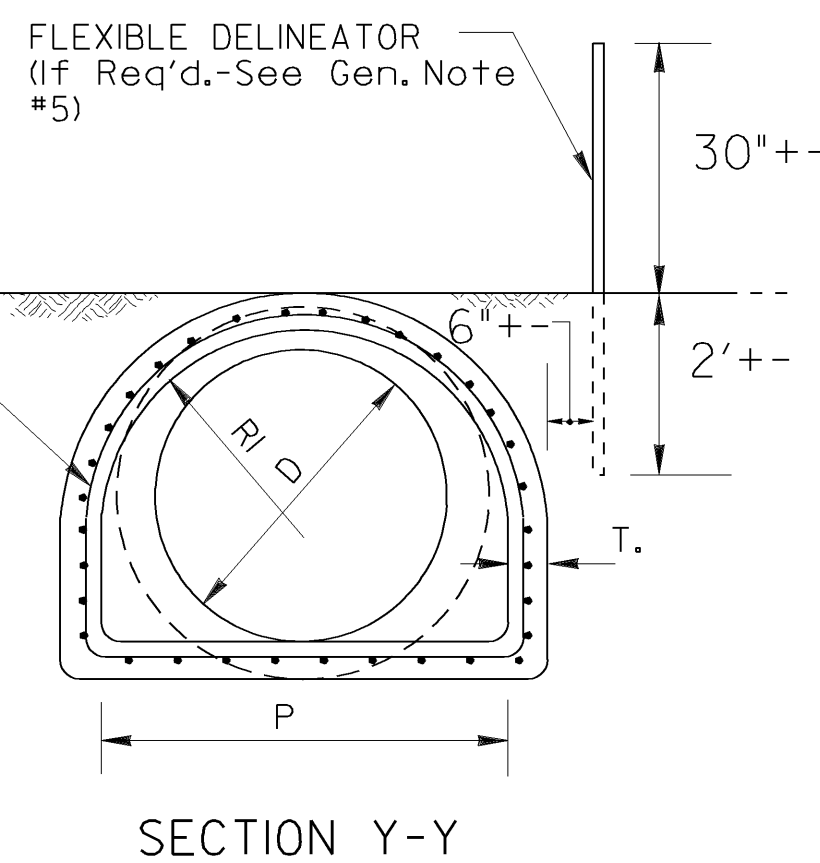
WALL THICKNESS (T) IS SHOWN AS NOMINAL AND MAY BE INCREASED AT PRODUCER'S OPTION FOR DESIRED JOINT DESIGN OR TO ALLOW A FLAT OUTSIDE BOTTOM ON THE FLARE, WITH INSIDE DIMENSIONS OF FLARE RETAINED AS SHOWN.

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

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

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

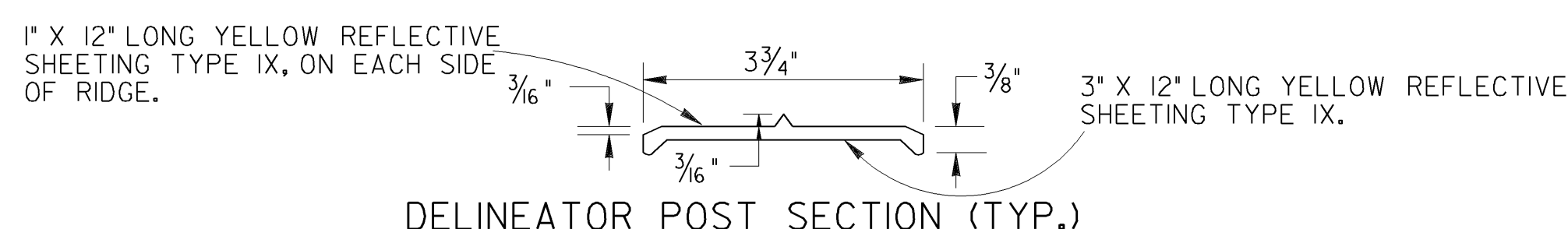
* NOTE: "C" AND "L" DIMENSION MAY BE MEASURED TO EITHER END OF JOINT CONNECTION AT PIPE.



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

GENERAL NOTES :

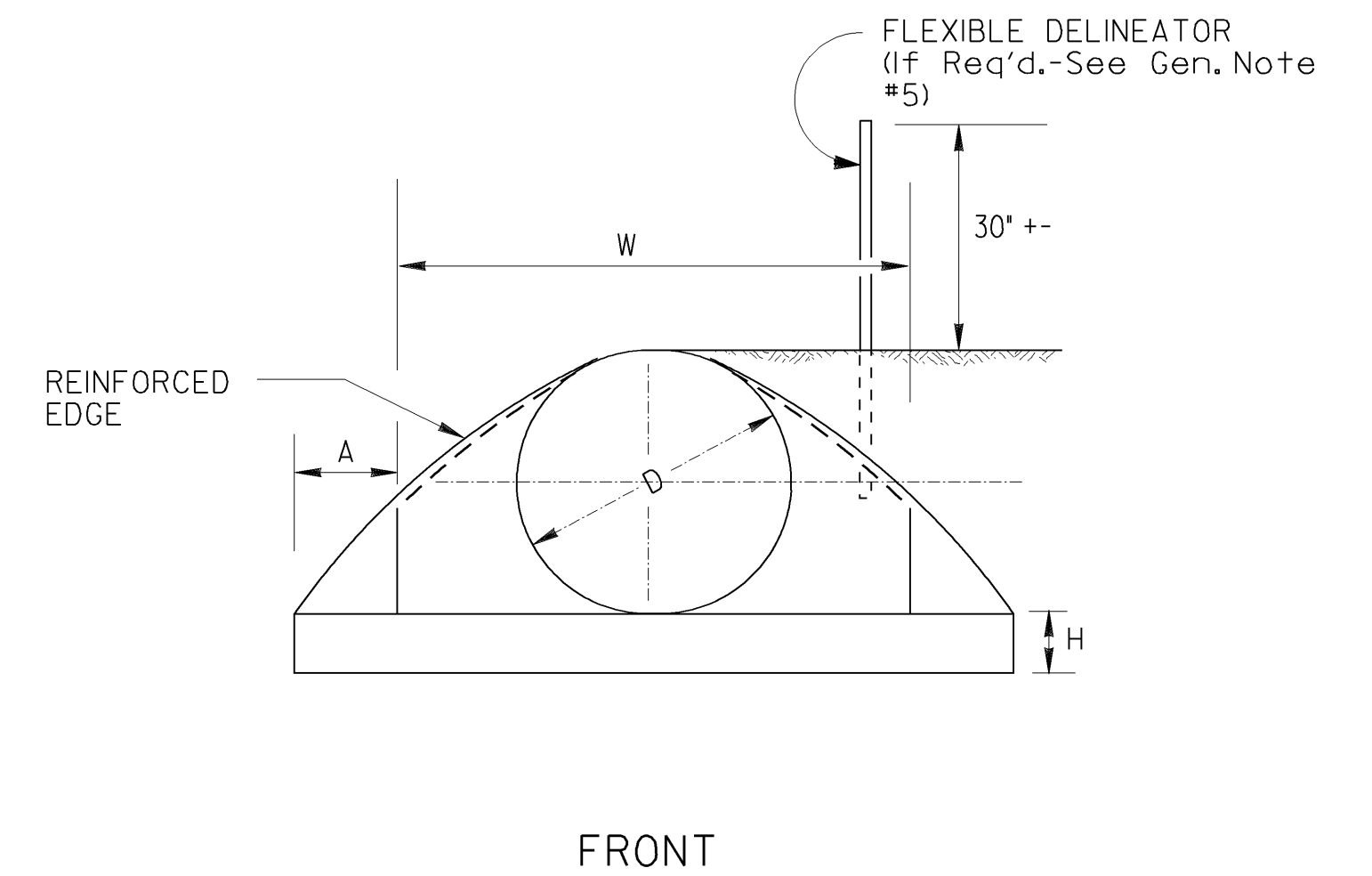
1. TOEWALLS ARE REQ'D. FOR OUTLETS OF CONC. STORM DRAINS, EXCEPT WHERE DITCH PAVING OR OTHER EROSION PROTECTION IS PROVIDED OR WHERE THE OUTLET VELOCITY IS LESS THAN 8 FT/SEC. TOEWALLS ARE NOT REQUIRED FOR SIDE DRAINS, SLOPE DRAINS OR INLETS OF STORM DRAINS THIS CRITERIA MAY BE VARIED WHERE SPECIFIED BY THE DESIGNER OR THE ENGINEER.
 2. TOEWALLS WILL BE PAID FOR AS CU. YDS. OF CLASS "A" OR "B" CONCRETE. CONTRACTOR MAY ELECT TO CONSTRUCT TOE WALL WITH SAND CEMENT BAG RIPRAP OR STONE RIPRAP TO SAME MINIMUM DIMENSIONS WITH NO ADDITIONAL PAYMENT.
 3. PRECAST TOEWALLS SHALL BE CL. "A" CONCRETE; CAST-IN-PLACE TOEWALLS MAY BE CL. "A" OR "B" CONCRETE AND MAY BE TRENCH FORMED. WHERE PLANS ITEMIZE ONE CLASS OF CONCRETE AND CONTRACTOR ELECTS TO USE OTHER CLASS, NO ADDITIONAL PAYMENT IS MADE. NO PAYMENT IS MADE FOR STEEL IN TOEWALL.
 4. CENTERLINE OF FLARED END SECTION WILL ALIGN WITH CENTERLINE OF PIPE, IF PIPE IS SKEWED, THE EMBANKMENT SLOPE WILL BE WARPED TO CONFORM WITH END SECTION.
 5. FLEXIBLE DELINEATORS SHALL BE REQUIRED AT CROSS DRAIN FLARED END SECTIONS, BOTH INLET AND OUTLET. PAYMENT FOR FLARED END SECTION WILL INCLUDE DELINEATORS, SEE DETAIL AND NOTES BELOW. DELINEATORS NOT REQ'D. FOR SIDE DRAIN, SLOPE DRAIN, OR LONG PIPE.



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

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

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



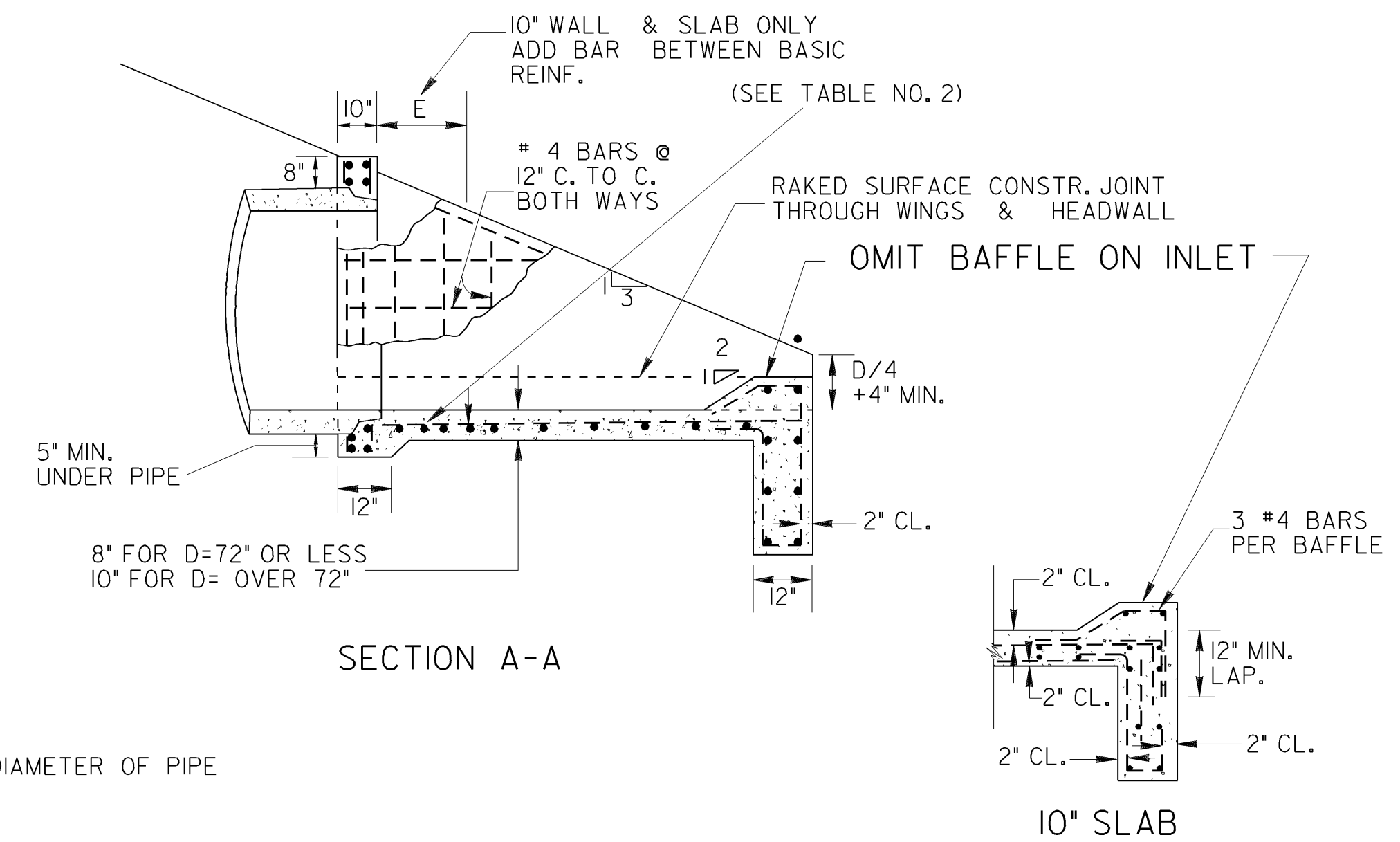
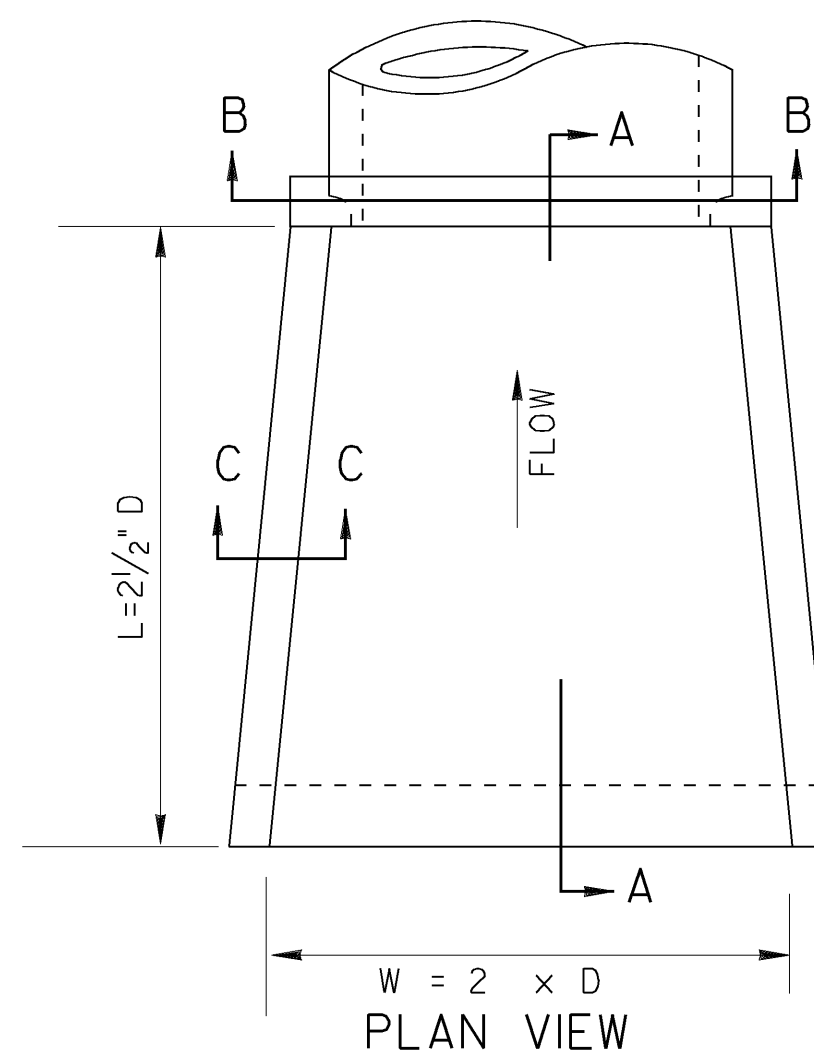
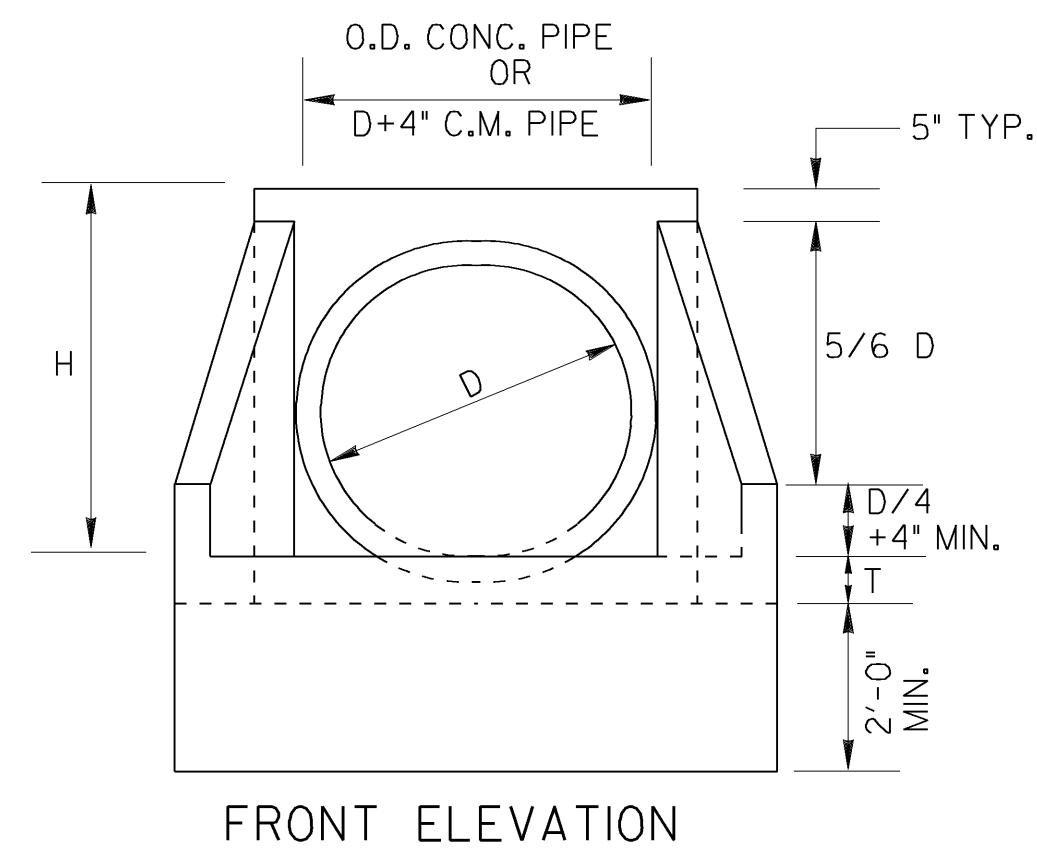
NOTE 'B':

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

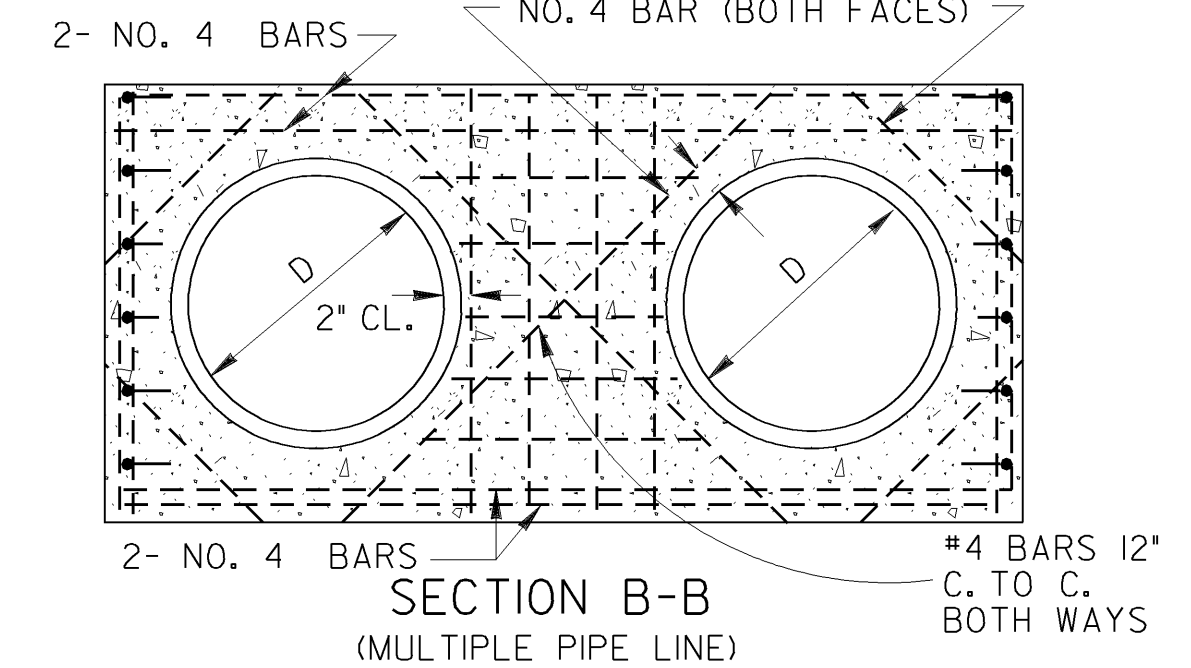
- (a) A STRAP BAND OR THREADED ROD PROVIDED BY THE MANUFACTURER WILL LOCK END SECTION ONTO PIPE, A CORRUGATION AT THE PIPE AND WILL BE NON-SPIRALED (PERPENDICULAR TO CL OF PIPE.)
- (b) A DIMPLE BAND COLLAR WILL BE SHOP BOLTED TO END SECTION. PIPE WILL BE INSERTED INTO BAND COLLAR TO MEET THE END SECTION.
- (c) A STUB PIPE WILL BE RIVETED TO THE END SECTION AND THE MAIN PIPE CONNECTED TO THE STUB WITH A NORMAL CONNECTING BAND.
- (d) OTHER TYPE CONNECTION IF RECOMMENDED BY MANUFACTURER AND APPROVED BY THE D.O.T.

				6-9-06	DATE	DEPARTMENT OF TRANSPORTATION	
				REV. REFLECTIVE SHEETING	REVISION	STATE OF GEORGIA	
						STANDARD FLARED END SECTIONS FOR PIPES	
						NO SCALE	REV. & REDR. SEPT., 1999
				GLO	BY	DES. _____ REV. _____ TRF. _____ CHK. _____	(SUBMITTED) <u>B. A. H.</u> STATE ROAD & AIRPORT DESIGN ENGINEER (APPROVED) <u>O. L. H.</u> CHIEF ENGINEER
							NUMBER 1120

INLET HEADWALL



D = INSIDE DIAMETER OF PIPE



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

#4 BARS 12" C. TO C. BOTH WAYS

2" CL.

ADD'L. BARS D/2 ABOVE SLAB & IN BOTTOM SLAB SEE SEC. A-A & TABLE NO. 2

RAKED CONSTR. JT.

10"

1'-6" MIN. LAP

2" CL.

1'-6" MIN. LAP ABOVE CONSTR. JT. (BASIC REINF.)

SECTION C-C

D	ADD'L. BAR	E
84"	#4	5'
96"	#4	8'

1'-8"

1/2 D + 2"

ADDITIONAL BAR DETAIL

*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

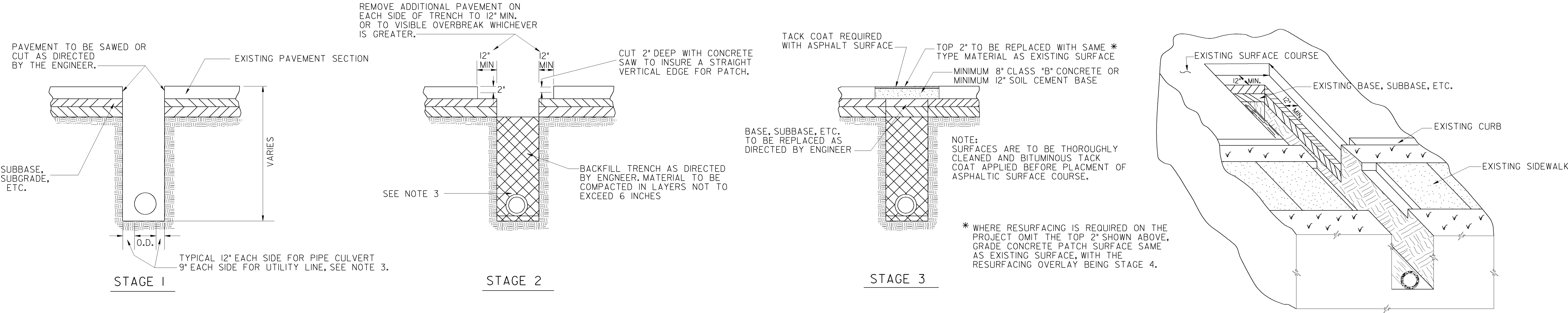
H = D + 10" MIN. FOR C.M. PIPE
H = D + PIPE WALL THICKNESS + 8" FOR CONC. PIPE
(1 3/4 D + 9" TYP.)

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

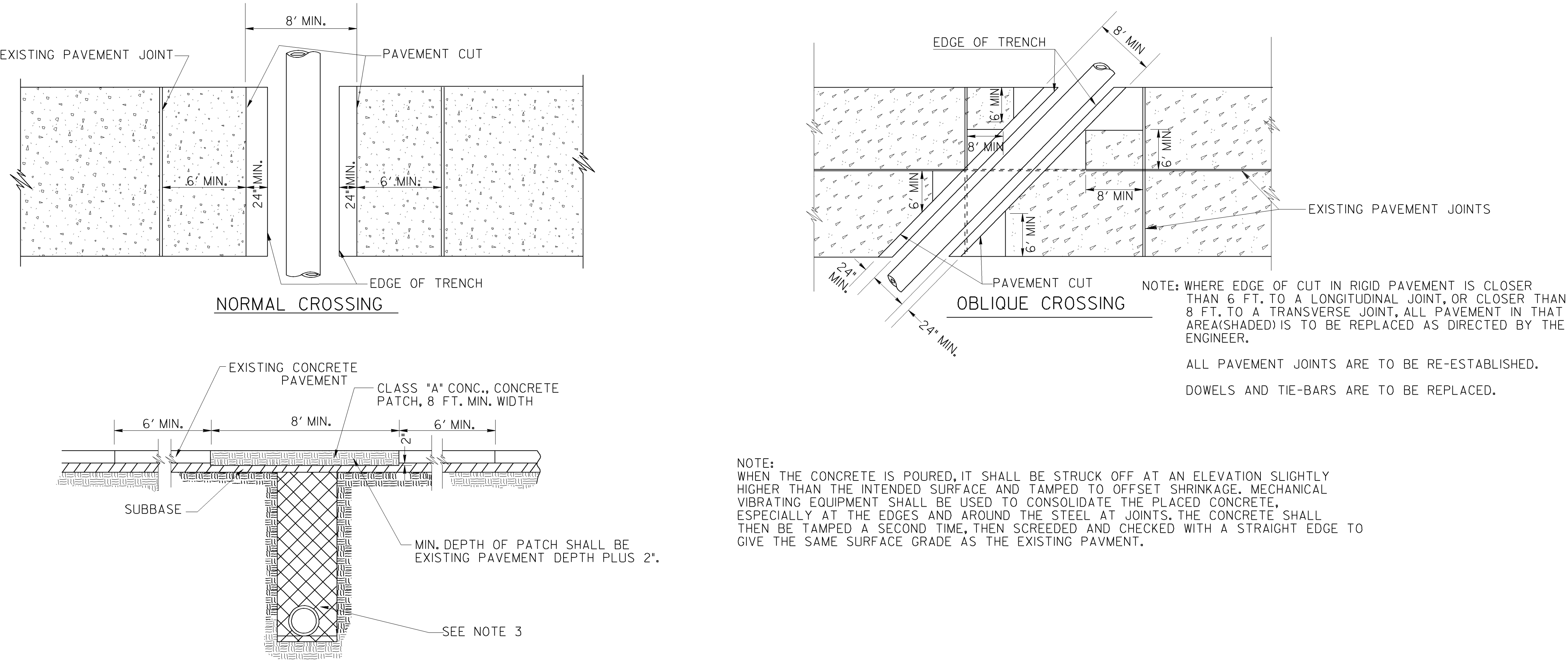
			DATE	DEPARTMENT OF TRANSPORTATION	
				STATE OF GEORGIA	
			REVISION	<p>STANDARD TAPERED INLET HEADWALL - OUTLET HEADWALL (BUILT-IN-PLACE)</p>	
				NO SCALE	REV. & REDR. OCT., 1999
	BY	DES. _____ DRW. _____ TRA. _____ CHK. _____	(SUBMITTED) <i>James A. Kennel</i> STATE ROAD & AIRPORT DESIGN ENGR. (APPROVED) <i>Paul L. Pankel</i> CHIEF ENGINEER	NUMBER 1125	

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	WID 0208-1		

STORM DRAIN AND UTILITY INSTALLATION BY OPEN CUT - GENERAL



STORM DRAIN AND UTILITY INSTALLATION BY OPEN CUT ACROSS P.C. CONCRETE PAVING

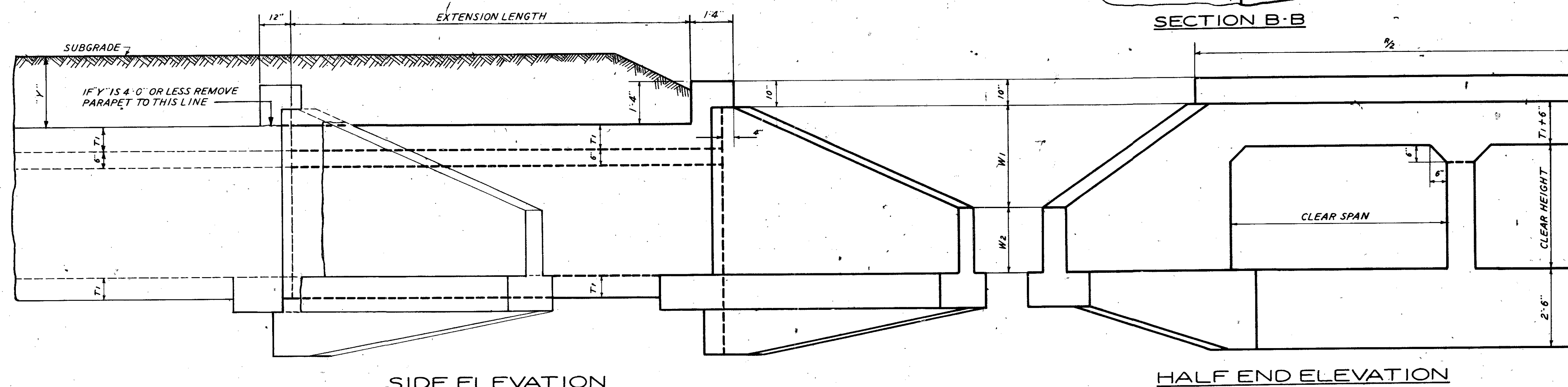
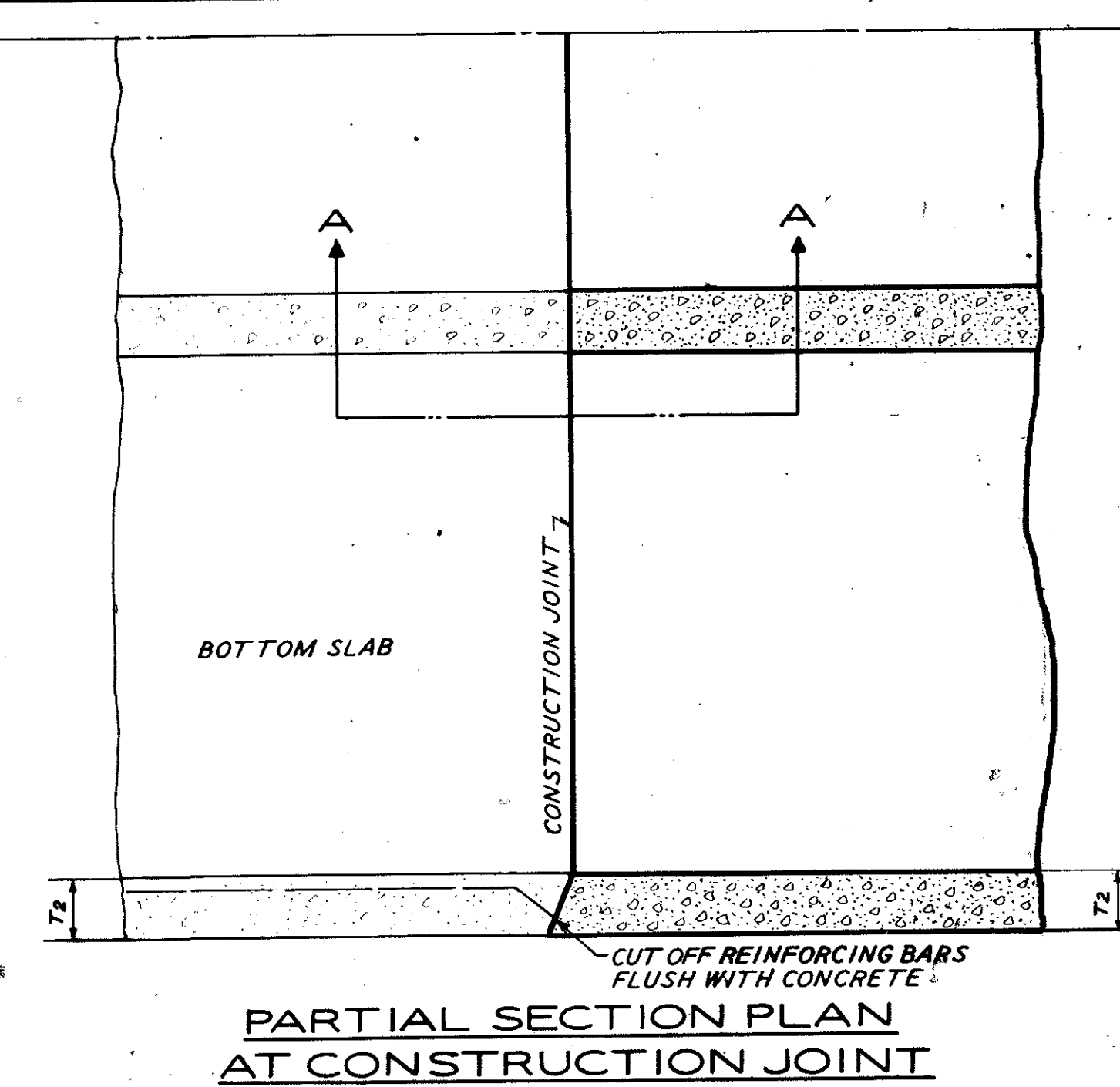
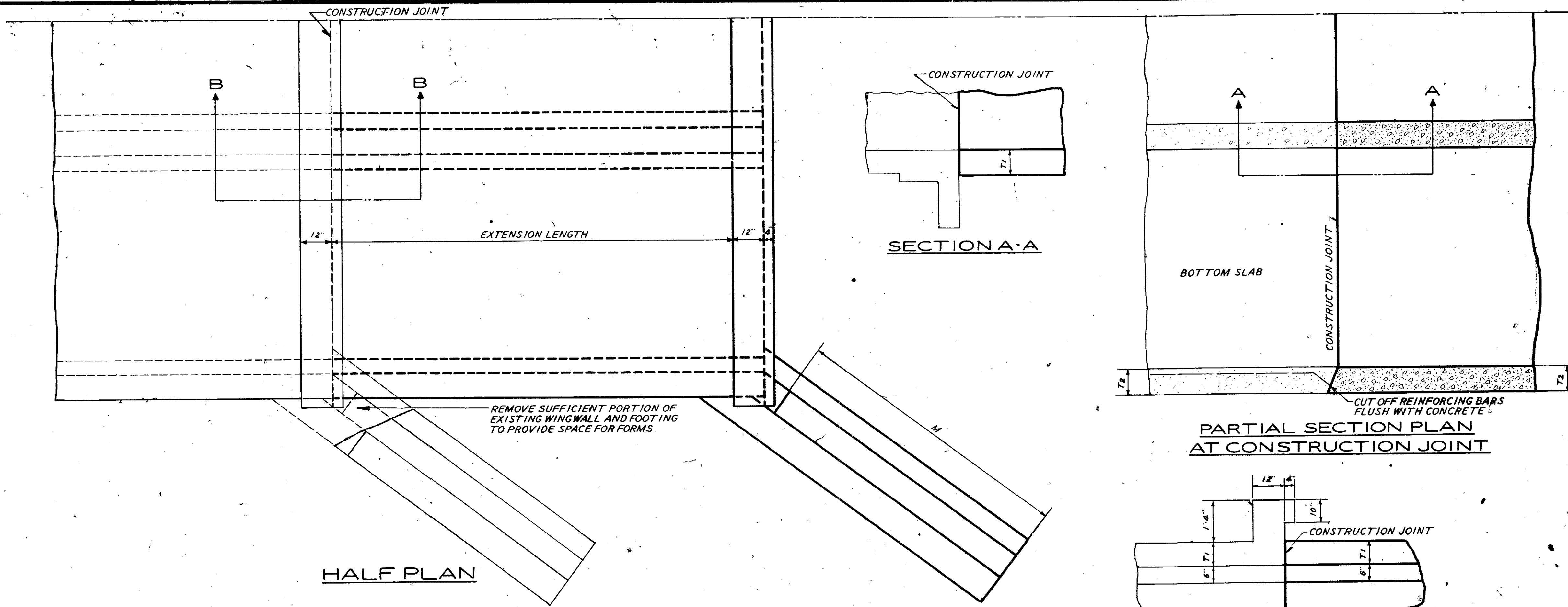


- GENERAL NOTES:
- SPECIFICATIONS: GEORGIA STANDARD, CURRENT EDITION & SUPPLEMENTS THERETO.
 - (a) OTHER PAVEMENT REPLACEMENT MATERIALS, SUCH AS HIGH EARLY STRENGTH CONCRETE, MAY BE SUBSTITUTED FOR MATERIALS SHOWN WHEN CALLED FOR IN THE PLANS OR BY THE ENGINEER.
(b) PAYMENT FOR PIPE CULVERT OR UTILITY SHALL INCLUDE SAWING AND/OR CUTTING AND REMOVING EXISTING PAVEMENT AND REPLACING THE PAVEMENT AS SPECIFIED. PAYMENT FOR PIPE OR UTILITY INCLUDES THIS PAVEMENT REPLACEMENT MATERIAL, REGARDLESS OF WHERE MATERIALS SHOWN ARE USED OR WHERE OTHER MATERIALS SUCH AS HIGH EARLY STRENGTH CONCRETE ARE USED.
(c) PAYMENT FOR PIPE CULVERT OR UTILITY INSTALLATION SHALL INCLUDE REPLACING IN KIND ANY PORTIONS OF SIDEWALK, CURB, CURB & GUTTER, MEDIAN PAVING, DRIVEWAYS, ETC., WHICH ARE DISTURBED DUE TO THE INSTALLATION.
 - TRENCH DETAIL SHOWN IS GENERAL, SEE STANDARD IO30D FOR DETAILS REQUIRED FOR PIPE CULVERT INSTALLATIONS. SEE THE UTILITIES MANUAL FOR UTILITY INSTALLATION REQUIREMENTS.
 - AFTER REMOVING EXISTING PAVEMENT, THE SUBBASE AND VERTICAL FACE OF EXISTING PAVING SHALL BE DAMPED (BUT NOT WET), ADDITIONALLY, THE VERTICAL FACE OF THE EXISTING PAVEMENT SHALL BE PAINTED WITH A SOLUTION OF PORTLAND CEMENT AND WATER MIXED TO THE CONSISTENCY OF HEAVY PAINT. THE CONCRETE MIX SHALL THEN BE POURED BEFORE THIS SURFACE DRIES OUT. AFTER CONCRETE IS POURED, IT SHALL BE WORKED INTO ALL CORNERS AND INTO ALL ROUGH SURFACES OF THE EXISTING PAVEMENT.
 - WHERE PIPE IS REMOVED, BUT NOT REPLACED, PAYMENT FOR PIPE REMOVAL INCLUDES ALL ITEMS DESCRIBED IN GENERAL NOTE 2., WITH ALL OTHER NOTES AND DETAILS ALSO BEING APPLICABLE.

NOTE: THIS STANDARD IS FOR USE WHERE PERMANENT PAVEMENT PATCHING IS REQUIRED. TEMPORARY PATCHING, IF REQUIRED, SHALL BE ACCORDING TO OTHER DETAILS, SPECIFICATIONS, AND/OR AS DIRECTED BY THE ENGINEER.

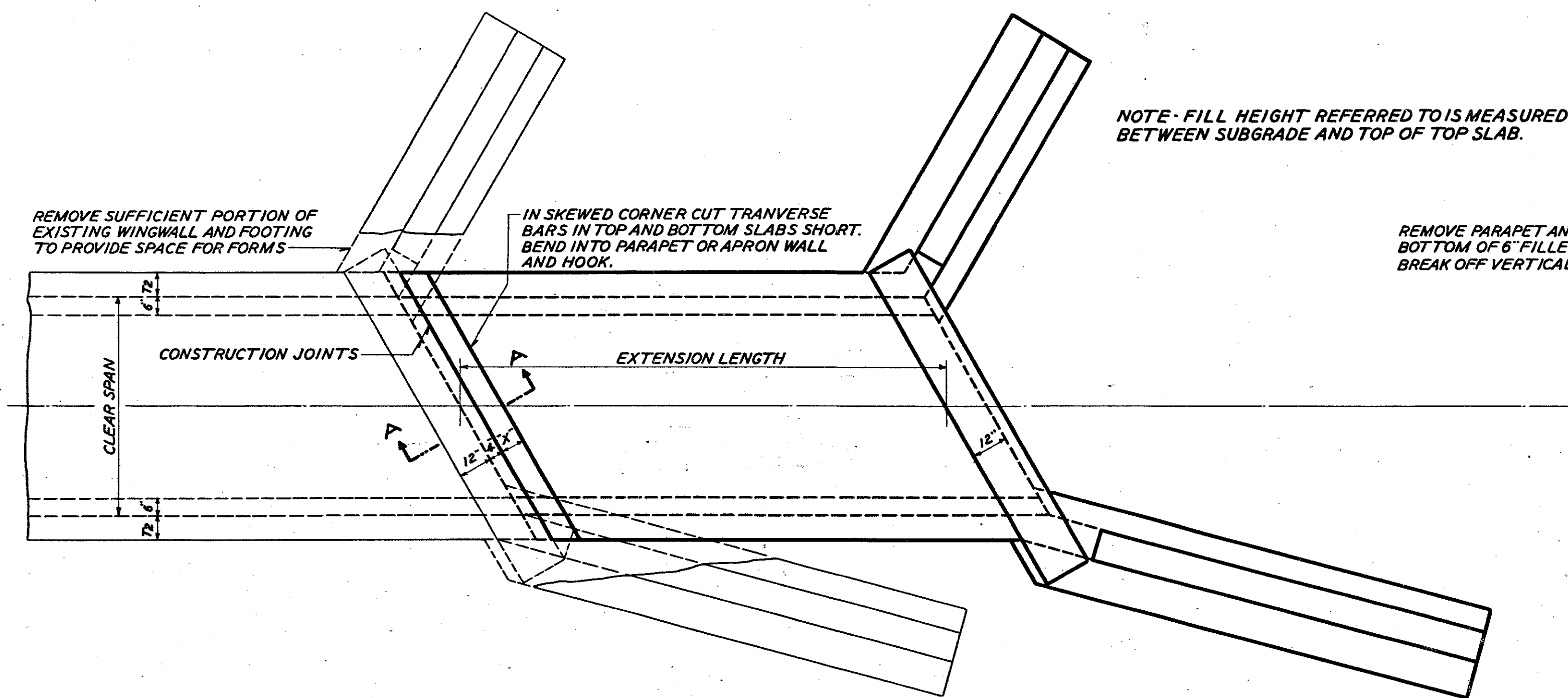
	DATE	DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA	
	REVISION	STANDARD PAVEMENT PATCHING DETAILS (STORM DRAIN OR UTILITY INSTALLATIONS BY OPEN CUT ACROSS EXISTING PAVEMENT)	
		NO SCALE	REV. & REDR., AUG. 1999
BY	REV. _____ CHK. _____	(SUBMITTED) <i>James A. Kaniel</i> STATE ROAD & AIRPORT DESIGN ENGR. (APPROVED) <i>Paul L. Condit</i> CHIEF ENGINEER	NUMBER 1401

STATE	PROJECT NUMBER	SHEET No.	TOTAL SHEETS
GA.	WID 0208-1		

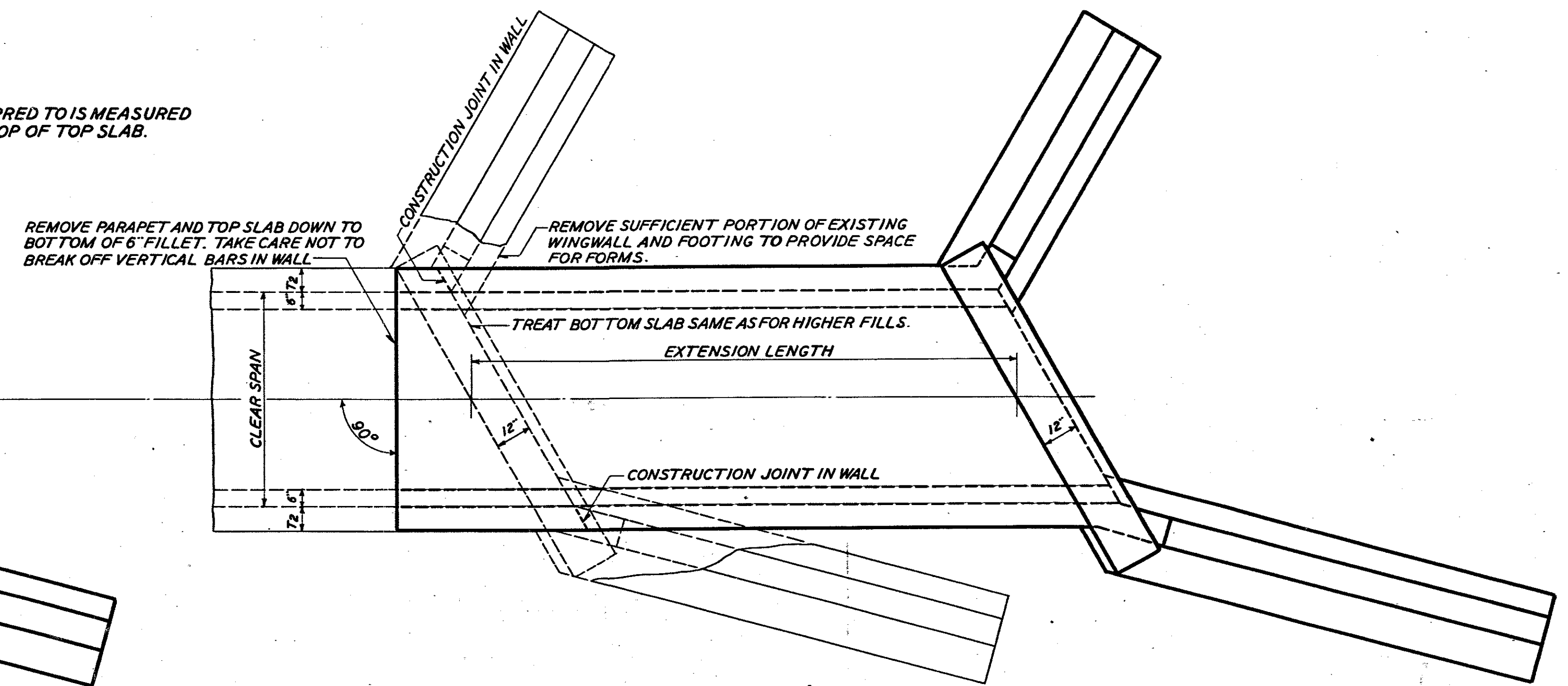


GENERAL NOTES
 ALL CONCRETE SHALL BE CLASS "A".
 FOR DETAILS OF EXTENDED PORTION OF CULVERT SEE STANDARD DRAWING REFERRED TO ON SUMMARY SHEET OF PLANS.
 EXISTING STRUCTURE SHOWN IN LIGHT LINES.
 ADDED PORTION SHOWN IN HEAVY LINES.

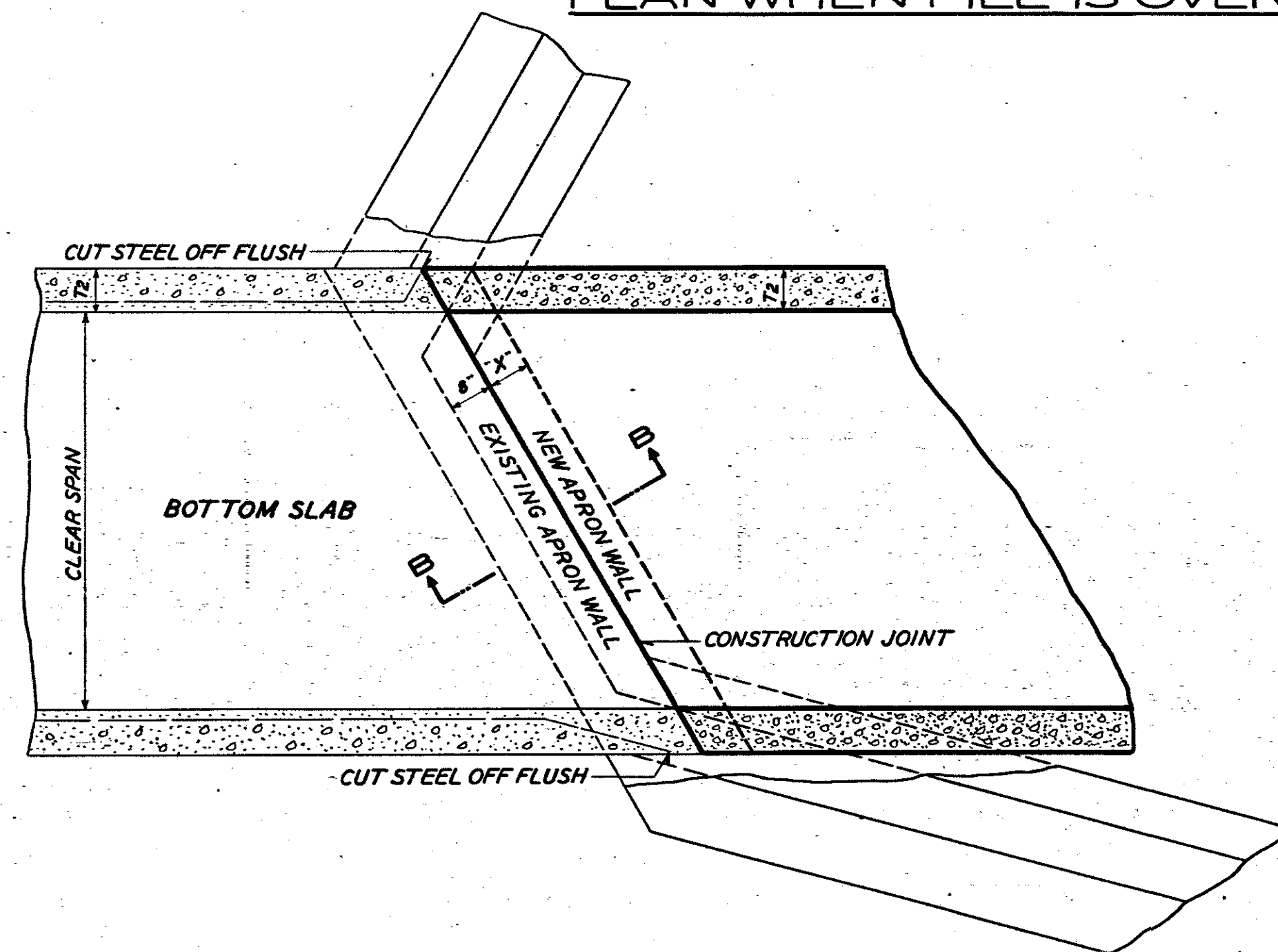
DATE		1-66		STATE HIGHWAY DEPARTMENT OF GEORGIA	
REVISIONS		DEL. REF. BID. PRICE		BRIDGE DEPARTMENT	
DESIGNED		DRAWN		STANDARD	
CHECKED		TRACED		DETAILS FOR EXTENDING	
				CONCRETE BOX CULVERTS	
				NO SCALE	
				AUGUST 1965	
				NUMBER	
				2317	



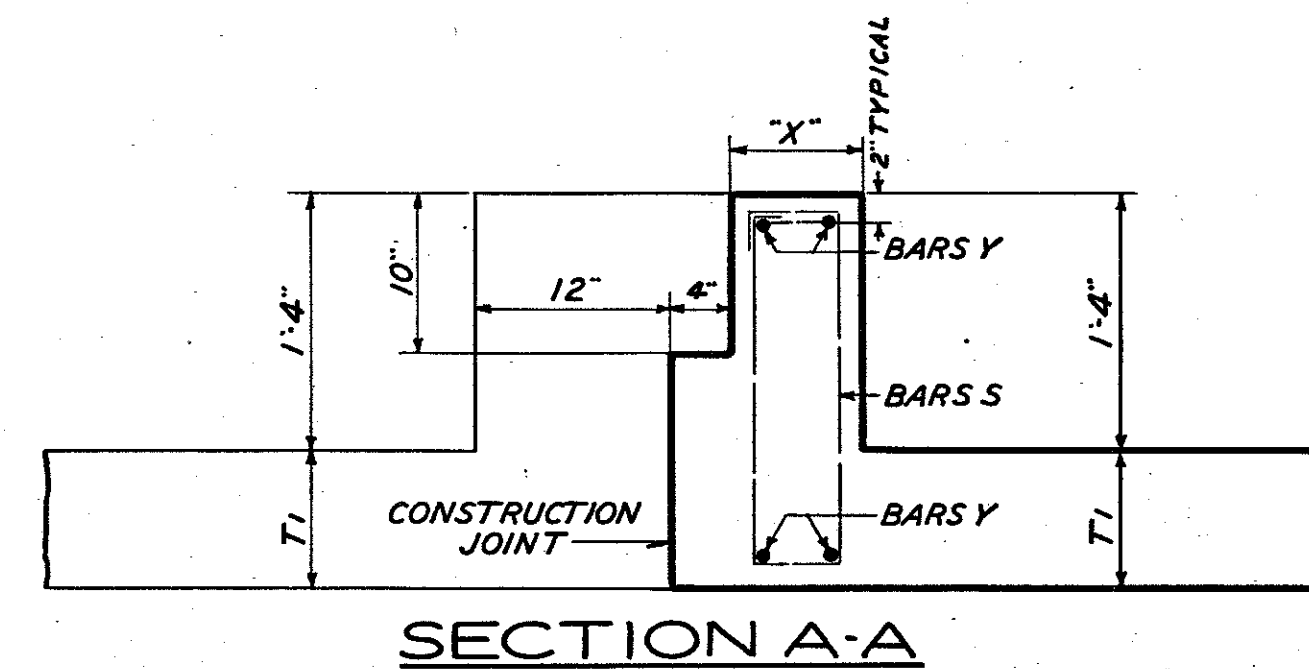
PLAN WHEN FILL IS OVER 4'-0" HIGH



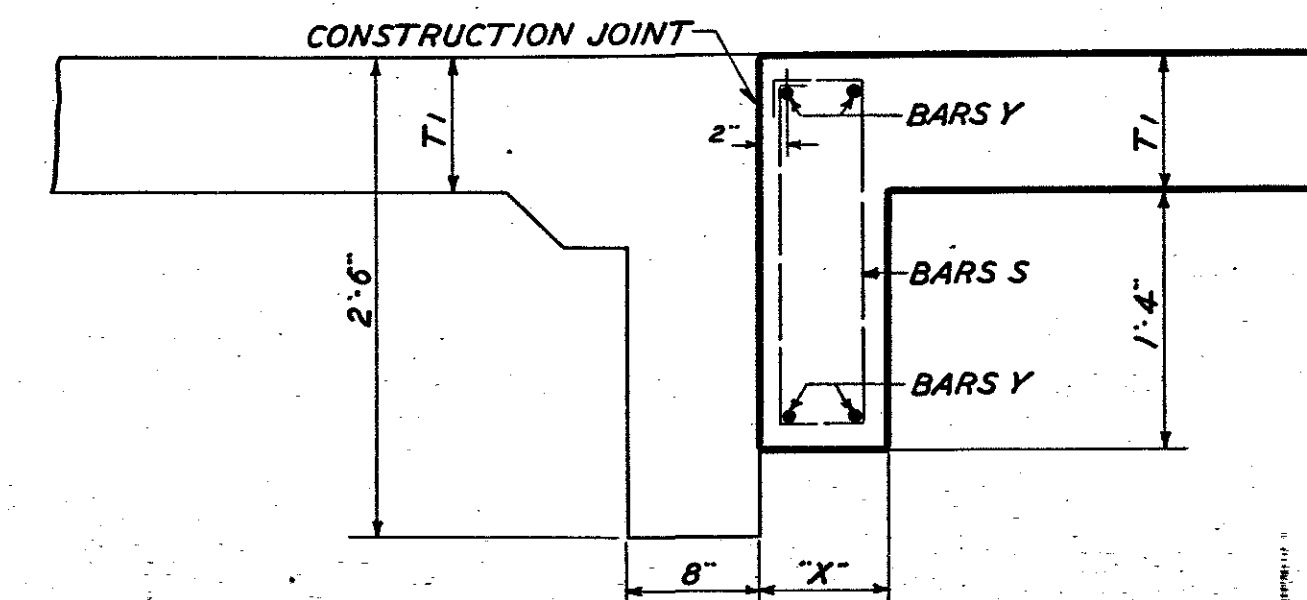
PLAN WHEN FILL IS 4'-0" OR LESS IN HEIGHT



SECTIONAL PLAN AT CONSTRUCTION JOINT
TYPICAL FOR ALL FILL HEIGHTS



SECTION A-A



SECTION B-B

CLEAR SPAN	"X"	Y BARS	S BARS
3'-0"	8"	2-3/8"	3/8" AT 16
4'-0"	8"	2-3/8"	3/8" AT 16
5'-0"	8"	2-3/8"	3/8" AT 16
6'-0"	8"	2-1"	3/8" AT 9
7'-0"	8"	2-1"	1/2" AT 10
8'-0"	8"	2-1 1/8"	1/2" AT 7 1/2"
9'-0"	11"	3-1 1/8"	1/2" AT 7
10'-0"	13"	3-1 1/8"	1/2" AT 6

NOTE - HOOK BOTH ENDS OF BARS Y. NUMBER OF Y BARS SHOWN REQUIRED AT EACH PLACE NOTED ON SECTIONS A & B. PARAPET AT END OF CULVERT SHALL BE REINFORCED AS SHOWN ON SECTION A-A INSTEAD OF STANDARD REINFORCING.

GENERAL NOTES

ALL CONCRETE SHALL BE CLASS "A"

FOR DETAILS OF EXTENDED PORTION OF CULVERT SEE STANDARD DRAWING REFERRED TO ON SUMMARY SHEET OF PLANS. EXISTING STRUCTURE SHOWN IN LIGHT LINES. ADDED PORTION SHOWN IN HEAVY LINES.

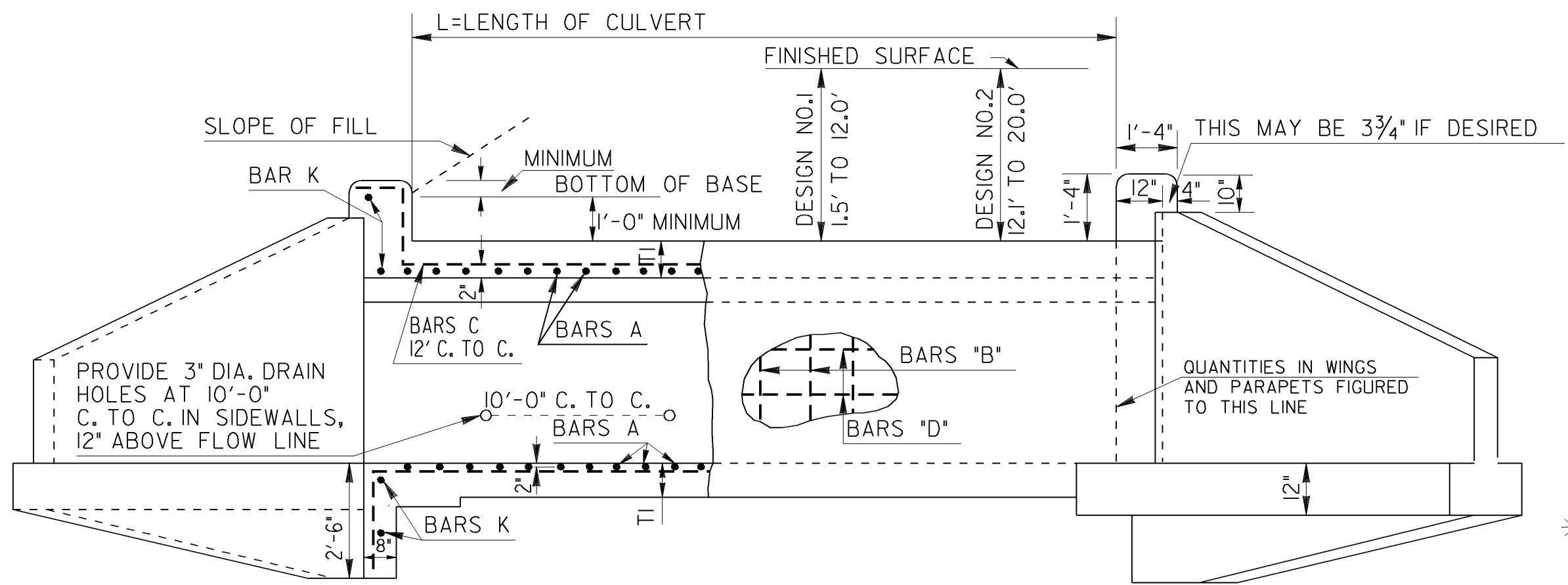
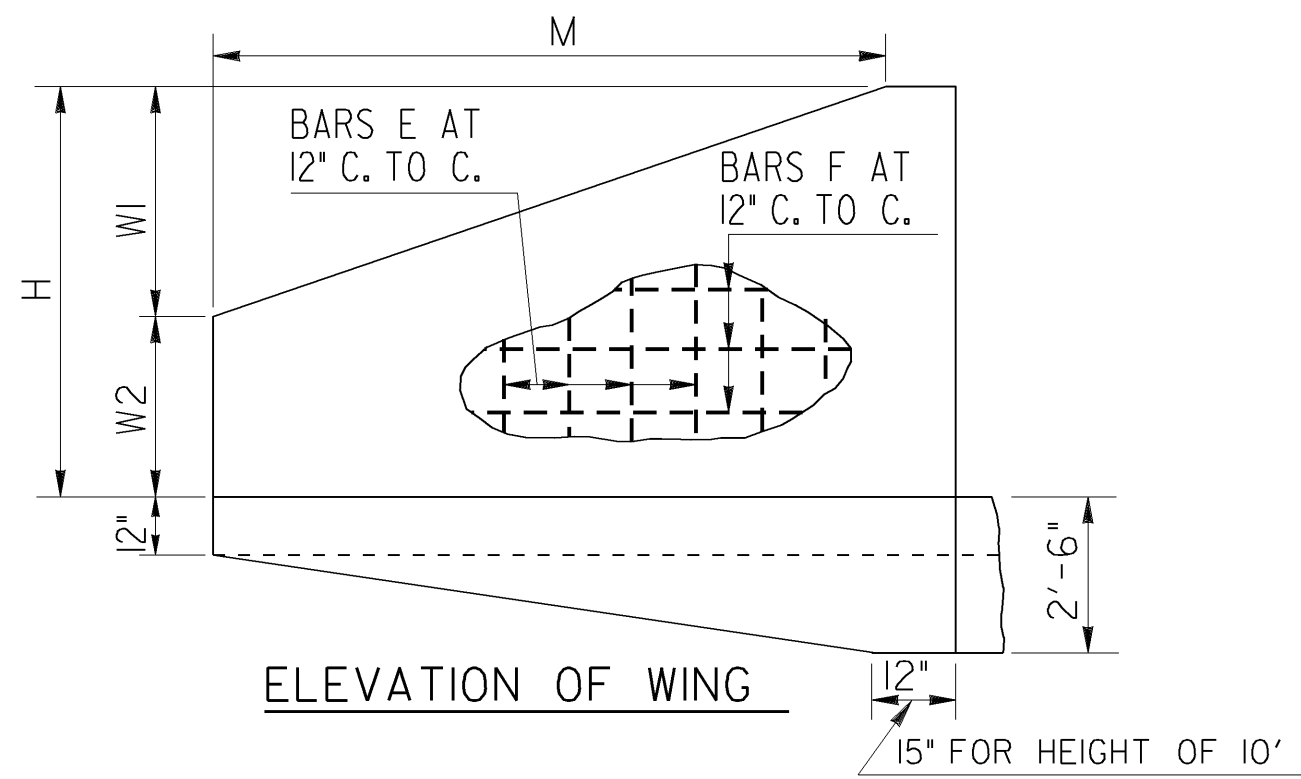
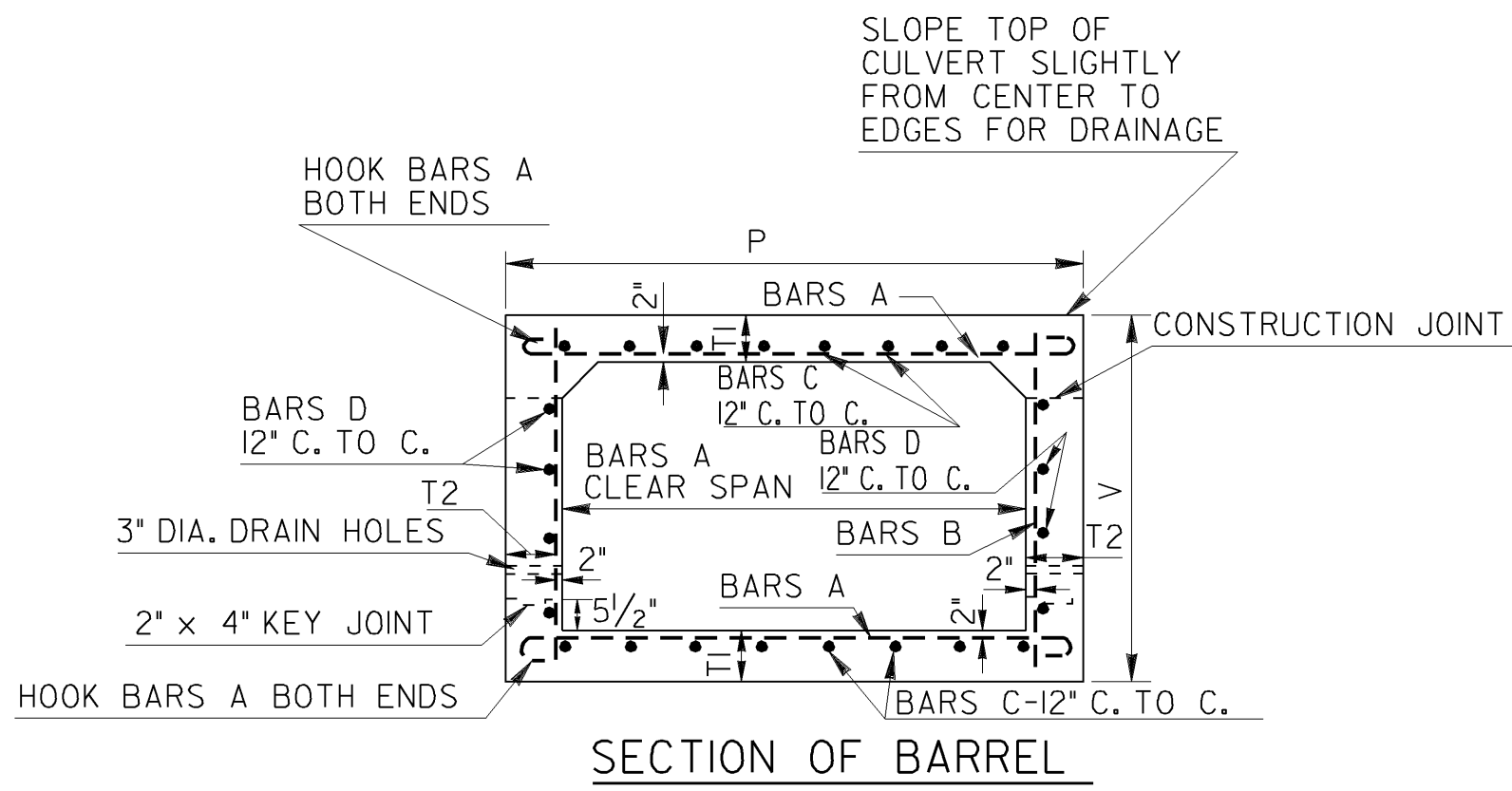
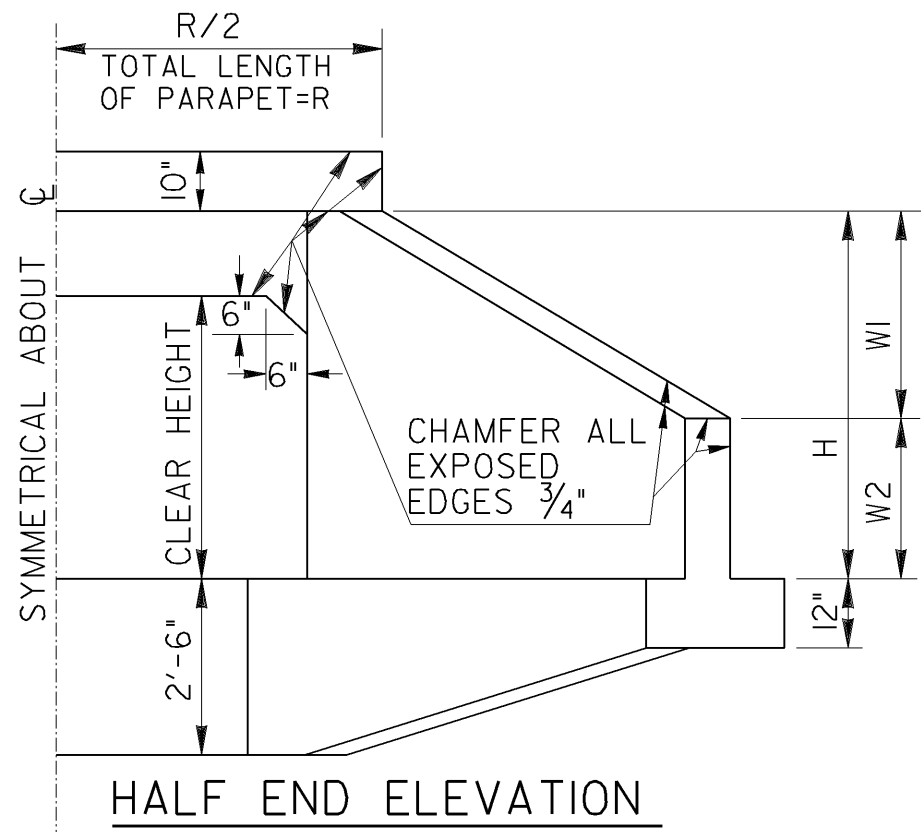
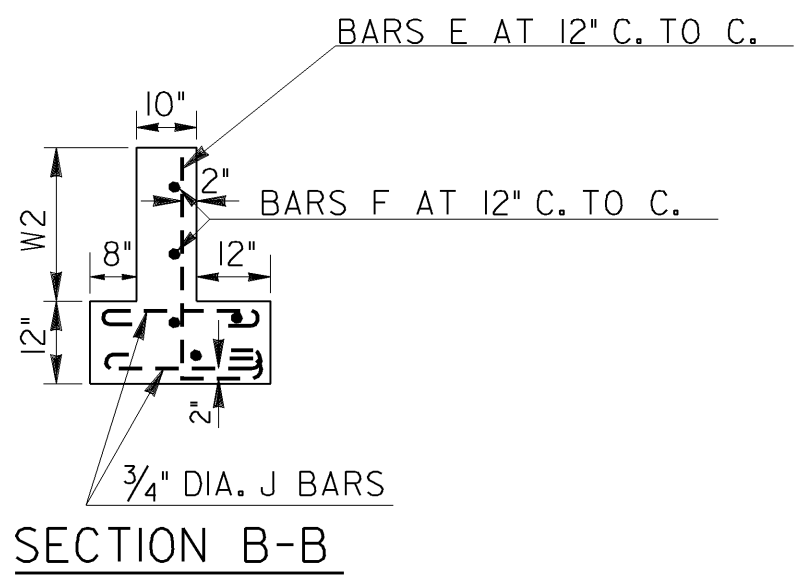
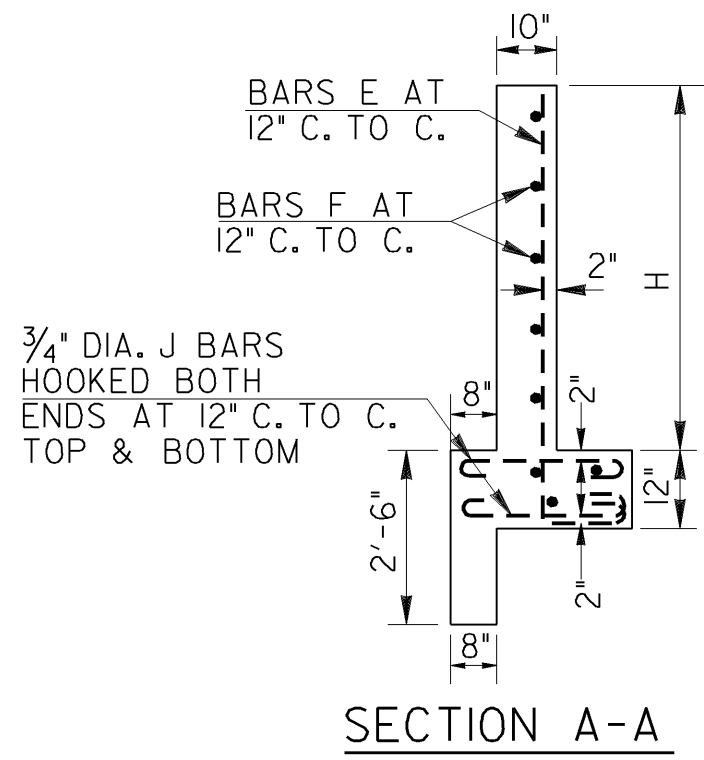
DATE 7-28-78		DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA	
REVISIONS GEN. NOTES REV.		STANDARD DETAILS FOR EXTENDING CONCRETE BOX CULVERTS WITH SKEWS BELOW 75°	
NO SCALE		JUNE 1955	
DESIGNED E.E.L.	DRAWN E.E.L.	SUBMITTED C. N. Crocker	NUMBER 2318
TRACED H.L.K.	CHECKED R.K.J.	APPROVED M. L. Hadburn	
STATE HIGHWAY ENGINEER			

DIMENSIONS																			QUANTITIES										
CLEAR SPAN	CLEAR HEIGHT	DESIGN NO. 1								DESIGN NO. 2								FOR ALL DESIGNS			REINFORCING STEEL			CONCRETE				CLEAR HEIGHT	CLEAR SPAN
		T1	T2	V	P	R	H	W1	T1	T2	V	P	R	H	W1	M	W2	X	LBS. PER LINEAL FT. OF BARREL		WINGWALLS & PARAPETS TOTAL LBS.	CU. YDS. PER L IN. FT. OF BARREL		WINGWALLS & PARAPETS					
																			DESIGN NO. 1	DESIGN NO. 2		DESIGN NO. 1	DESIGN NO. 2	CU. YD. CONC.	Z				
7'	4'	9½"	10"	5'-7"	8'-8"	9'-2"	5'-4"	3'-2½"	11"	10"	5'-10"	8'-8"	9'-2"	5'-6"	3'-4½"	9'-0"	2'-1½"	0	92.6	112.1	499	0.764	0.845	12.59	2'-1½"	4'	7'		
	5'	9½"	10"	6'-7"	8'-8"	9'-6"	6'-4"	3'-9½"	11"	10"	6'-10"	8'-8"	9'-6"	6'-6"	3'-11½"	10'-6"	2'-6½"	0	95.5	115.0	627	0.826	0.906	15.12	2'-1½"	5'			
	6'	9½"	10"	7'-7"	8'-8"	9'-6"	7'-4"	4'-5"	11"	10"	7'-10"	8'-8"	9'-6"	7'-6"	4'-7"	12'-0"	2'-11"	0	104.0	123.7	752	0.880	0.968	17.84	2'-1½"	6'			
	7'	9½"	10"	8'-7"	8'-8"	9'-10"	8'-4"	5'-0"	11½"	12"	8'-11"	9'-0"	9'-10"	8'-6"	5'-2"	13'-6"	3'-4"	0	111.2	133.9	912	0.950	1.167	20.89	2'-1½"	7'			
8'	4'	10"	10"	5'-8"	9'-8"	10'-2"	5'-5"	3'-1½"	12"	10"	6'-0"	9'-8"	10'-2"	5'-7½"	3'-4"	9'-0"	2'-3½"	0	106.6	134.3	515	0.853	0.972	13.08	2'-2"	4'	8'		
	5'	10"	10"	6'-8"	9'-8"	10'-6"	6'-5"	3'-8½"	12"	10"	7'-0"	9'-8"	10'-6"	6'-7½"	3'-11"	10'-6"	2'-8½"	0	109.5	137.2	646	0.915	1.034	15.64	2'-2"	5'			
	6'	10"	10"	7'-8"	9'-8"	10'-6"	7'-5"	4'-4"	12"	10"	8'-0"	9'-8"	10'-6"	7'-7½"	4'-6½"	12'-0"	3'-1"	0	118.1	146.0	770	0.976	1.096	18.38	2'-2"	6'			
	7'	10½"	10"	8'-9"	9'-8"	10'-10"	8'-5"	4'-11"	12½"	12"	9'-1"	10'-0"	10'-10"	8'-7½"	5'-1½"	13'-6"	3'-6"	0	125.5	156.7	932	1.068	1.299	21.45	2'-2½"	7'			
9'	8'	10½"	12"	9'-9"	10'-0"	10'-10"	9'-5"	5'-6"	13"	12"	10'-2"	10'-0"	10'-10"	9'-7½"	5'-8½"	15'-0"	3'-11"	1'-0"	136.9	166.2	2579	1.250	1.404	26.13	2'-2½"	8'	9'		
	4'	11"	10"	5'-10"	10'-8"	11'-2"	5'-6½"	3'-3½"	13"	10"	6'-2"	10'-8"	11'-2"	5'-9"	3'-6"	9'-6"	2'-3"	0	123.0	157.1	556	0.980	1.112	13.95	2'-3"	4'			
	5'	11"	10"	6'-10"	10'-8"	11'-6"	6'-6½"	3'-10½"	13"	10"	7'-2"	10'-8"	11'-6"	6'-9"	4'-1"	11'-0"	2'-8"	0	133.4	160.0	670	1.042	1.174	16.56	2'-3"	5'			
	6'	11"	10"	7'-10"	10'-8"	11'-6"	7'-6½"	4'-5½"	13½"	10"	8'-3"	10'-8"	11'-6"	7'-9"	4'-1"	12'-6"	3'-1"	0	142.1	169.1	820	1.104	1.269	19.38	2'-3"	6'			
9'	7'	11"	10"	8'-10"	10'-8"	11'-10"	8'-6½"	5'-1"	14"	12"	9'-4"	11'-0"	11'-10"	8'-9"	5'-3½"	14'-0"	3'-5½"	0	149.3	180.1	961	1.166	1.478	22.47	2'-3"	7'	9'		
	8'	11½"	12"	9'-11"	11'-0"	11'-10"	9'-6½"	5'-8"	14"	12"	10'-4"	11'-0"	11'-10"	9'-9"	5'-10½"	15'-6"	3'-10½"	1'-0"	170.4	189.5	2675	1.383	1.552	27.24	2'-3½"	8'			
	9'	11½"	12"	10'-11"	11'-0"	12'-0"	10'-6½"	6'-1"	15"	14"	11'-6"	11'-4"	12'-0"	10'-9"	6'-3½"	16'-6"	4'-5½"	1'-6"	181.4	204.7	3106	1.457	1.836	31.00	2'-3½"	9'			
	10'	11½"	12"	11'-11"	11'-0"	12'-4"	11'-6½"	6'-8"	15"	15"	12'-6"	12'-4"	12'-4"	11'-9"	6'-10½"	18'-0"	4'-10½"	2'-0"	186.6	211.6	3676	1.531	2.000	36.17	2'-3½"	10'			

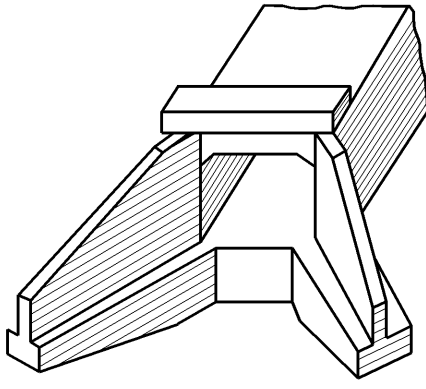
TRANSVERSE CONSTRUCTION JOINTS PLACED AT ANY OTHER LOCATION NOT SPECIFIED ABOVE SHALL BE FORMED WITH NO LONGITUDINAL REINFORCING STEEL PASSING THROUGH THE JOINTS.	
DATE	DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA
REVISION	STANDARD REINFORCED CONCRETE BOX CULVERTS SINGLE 7'x4' TO SINGLE 9'x10' FOR DEPTHS OF FILL UP TO 20 FT. NO SCALE
BY	DESIGNED _____ TRACED _____ CHECKED _____ REVISED _____ (SUBMITTED) <i>James A. Kennel</i> STATE ROAD & AIRPORT DESIGN ENGINEER (APPROVED) <i>Paul L. Gault</i> CHIEF ENGINEER
	REV. & REDR. NOV., 2001 NUMBER 2323 SHEET 10F 2

		DATE	DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA	
		REVISION	STANDARD REINFORCED CONCRETE BOX CULVERTS SINGLE 7'x4' TO SINGLE 9'x10' FOR DEPTHS OF FILL UP TO 20 FT.	
			NO SCALE	
			REV. & REDR. NOV., 2001	
BY	DESIGNED _____ TRACED _____ CHECKED _____ REVISED _____	(SUBMITTED) <i>James A. Kneal</i> STATE ROAD & AIRPORT DESIGN ENGINEER (APPROVED) <i>Paul L. Gault</i> CHIEF ENGINEER	NUMBER 2323 SHEET 1 OF 2	

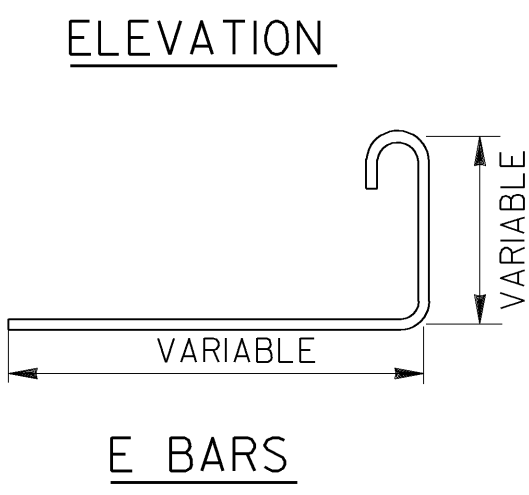
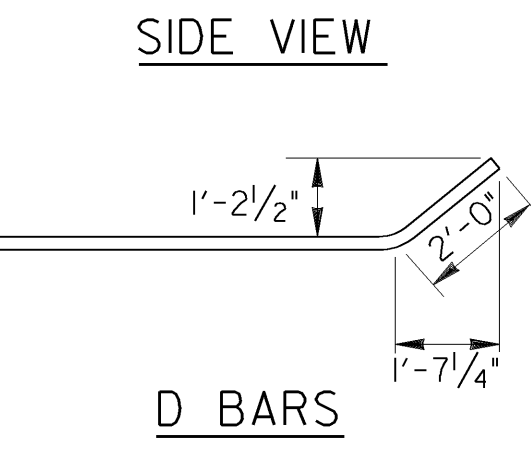
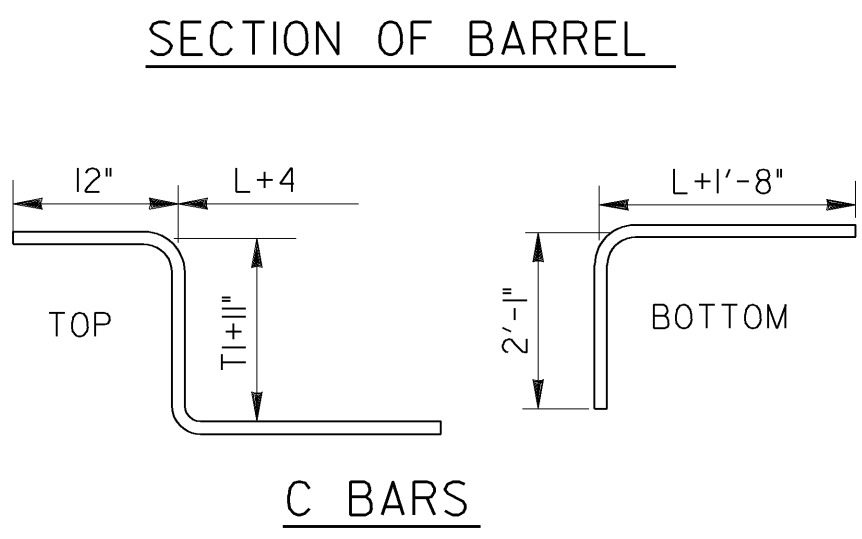
STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	WID 0208-1		



DESIGN DATA
LOADING-TYPICAL H-20 S16-44 AND/OR MILITARY SPECIFICATIONS-A.A.S.H.O. 1957, T 58
* HEIGHT OF PARAPET ABOVE CULVERT TOP SHALL BE 1'-4" FOR DESIGN I BARRELS AND REDUCED PROPORTIONATELY FOR INCREASED TOP SLAB THICKNESS OF HIGHER DESIGNS TO PROVIDE THE SPECIFIED Z DIMENSION.



- GENERAL NOTES:
1. CHAMFER-CHAMFER ALL EXPOSED EDGES 3/4".
 2. CONCRETE APRONS (SEPARATE STANDARD) ARE REQUIRED AT ALL OUTLETS. THE ENGINEER MAY ALLOW AN EXCEPTION FOR THE BED ROCK CONDITIONS. TOEWALLS UNDER PARAPETS MAY BE MODIFIED AT OUTLETS AS SHOWN ON STANDARD DETAIL FOR CONCRETE APRONS.
 3. QUANTITIES FOR STEEL SHOWN ARE COMPUTED CONSIDERING ALL A,B,C,D,G AND H BARS AS PART OF BARREL QUANTITIES. STEEL PER LIN. FT. IS AN AVERAGE VALUE FOR A CULVERT OF 40' LENGTH ALLOWING ONE LAP IN LONGITUDINAL BARS.
 4. PARAPETS AT INLETS SHALL BE CONSTRUCTED WITH A 4"/45° BEVEL.
 5. COVER-CULVERT TO HAVE MINIMUM OF 1.0' BELOW BOTTOM OF BASE OR CONCRETE PAVEMENT.



DATE	STATE HIGHWAY BOARD OF GEORGIA
REVISION	BRIDGE DEPARTMENT
	STANDARD REINFORCED CONCRETE BOX CULVERTS SINGLE 7'x4' TO SINGLE 9'x10' FOR DEPTHS OF FILL UP TO 20 FT.
	NO SCALE REV. & REDR. NOV., 2001
BY	DESIGNED (SUBMITTED) <i>James A. Kinnel</i> TRACED (STATE ROAD & AIRPORT DESIGN ENGINEER) CHECKED (APPROVED) <i>Paul L. Conley</i> REVISED CHIEF ENGINEER
	NUMBER 2323 SHEET 2 OF 2

BOX CULVERT REQUIREMENTS:

MINIMUM FILL HEIGHT FROM TOP OF CULVERT TO BOTTOM OF BASE WITHIN TRAVELWAY SHALL BE 12 INCHES.

MAXIMUM POUR LENGTH SHALL NOT EXCEED 30 FEET ALONG THE LENGTH OF THE CULVERT.

TRANSVERSE CONSTRUCTION JOINTS SHALL BE PLACED IN THE BARREL, NORMAL TO THE CENTERLINE OF CULVERT, AT THE OUTSIDE SHOULDER BREAK POINTS. LONGITUDINAL BARREL REINFORCING STEEL SHALL NOT BE CONTINUOUS THROUGH THESE JOINTS, PROVIDED THAT THE JOINTS ARE MORE THAN 15 FEET FROM THE BARREL ENDS.

WHEN TRANSVERSE CONSTRUCTION JOINTS OCCUR WITHIN 15 FEET OF THE BARREL ENDS OR WITHIN THE LIMITS OF THE PAVEMENT, THE LONGITUDINAL BARREL REINFORCING SHALL THEN BE CONTINUOUS THROUGH SUCH JOINTS. THE MINIMUM LENGTH OF LAP SPLICE FOR LONGITUDINAL REINFORCING SHALL BE 24 INCHES.

TRANSVERSE CONSTRUCTION JOINTS PLACED AT ANY OTHER LOCATION NOT SPECIFIED ABOVE SHALL BE FORMED WITH NO LONGITUDINAL REINFORCING STEEL PASSING THROUGH THE JOINTS.

					DATE	DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA									
					REVISION	STANDARD REINFORCED CONCRETE BOX CULVERTS SINGLE 10' X 4' TO TRIPLE 10' X 12' FOR 75°, 60°, AND 45° SKEWS									
						NO SCALE					REV. & REDR. NOV., 2001				
						DESIGNED _____ REDRAWN _____ TRACED _____ CHECKED _____	(SUBMITTED) <i>Jameal Bandy</i> STATE ROAD & AIRPORT DESIGN ENGINEER (APPROVED) <i>Paul L. Carter</i> CHIEF ENGINEER					NUMBER 2330 SHEET 1 OF 4			

REINFORCING STEEL - 2 WINGS																																		
CLEAR SPAN	CLEAR HEIGHT	SAME FOR ALL DEPTHS OF FILL																												CLEAR HEIGHT	CLEAR SPAN			
		45° SKEW																																
		WING C																																
10'	4'	E BARS AT 12"C. TO C. SIZES AS SHOWN FOR WING A																				F BARS 1/2"DIA. AT 12"C. TO C.												
		NUMBER	4	4	4	4	4	4	4	4	4	2												10	2	2	2							
	LENGTH	7'-10"	7'-7"	7'-2"	6'-10"	6'-5"	6'-0"	5'-7"	5'-2"	4'-9"	4'-7"													18'-8"	14'-0"	9'-0"	4'-1"						4'	
	5'	NUMBER	4	4	4	4	4	4	4	4	4	4												10	2	2	2	2					5'	
		LENGTH	8'-10"	8'-7"	8'-2"	7'-9"	7'-4"	6'-11"	6'-7"	6'-1"	5'-8"	5'-4"	4'-11"												2'-8"	18'-8"	13'-10"	9'-0"	4'-1"					
	6'	NUMBER	4	4	4	4	4	4	4	4	4	4	4	2										10	2	2	2	2	2				6'	
		LENGTH	9'-10"	9'-7"	9'-2"	8'-9"	8'-4"	7'-11"	7'-6"	7'-0"	6'-7"	6'-2"	5'-9"	5'-4"	5'-1"										24'-2"	22'-10"	18'-1"	13'-6"	8'-10"	4'-1"				
	7'	NUMBER	4	4	4	4	4	4	4	4	4	4	4	4	4	2									10	2	2	2	2	2	2			7'
		LENGTH	11'-7"	11'-4"	10'-10"	10'-4"	9'-9"	9'-4"	8'-10"	8'-4"	7'-11"	7'-4"	6'-10"	6'-4"	5'-11"	5'-4"	5'-2"									28'-2"	27'-0"	22'-5"	17'-11"	13'-3"	8'-1"	4'-0"		
	8'	NUMBER	4	4	4	4	4	4	4	4	4	4	4	4	4	4	2								12	2	2	2	2	2	2			8'
		LENGTH	13'-5"	13'-1"	12'-7"	12'-0"	11'-6"	10'-11"	10'-5"	9'-10"	9'-3"	8'-9"	8'-3"	7'-8"	7'-2"	6'-7"	6'-0"	5'-9"								30'-8"	26'-10"	22'-5"	17'-9"	13'-1"	8'-6"	3'-10"		
	9'	NUMBER	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4						12	2	2	2	2	2	2	2		9'
		LENGTH	15'-0"	14'-9"	14'-1"	13'-6"	12'-10"	12'-4"	11'-8"	11'-2"	10'-6"	10'-0"	9'-5"	8'-10"	8'-3"	7'-9"	7'-1"	6'-7"	5'-11"							33'-2"	30'-10"	26'-5"	22'-0"	17'-6"	13'-0"	8'-5"	3'-11"	
	10'	NUMBER	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4					12	2	2	2	2	2	2	2		10'
		LENGTH	16'-8"	16'-3"	15'-7"	15'-0"	14'-6"	13'-10"	13'-3"	12'-7"	12'-0"	11'-6"	10'-10"	10'-2"	9'-8"	9'-1"	8'-6"	7'-10"	7'-2"	6'-8"						35'-8"	34'-10"	30'-6"	26'-1"	21'-7"	17'-3"	12'-9"	8'-2"	3'-9"
	11'	NUMBER	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4				14	2	2	2	2	2	2	2		11'
		LENGTH	18'-2"	17'-9"	17'-1"	16'-6"	15'-11"	15'-3"	14'-7"	14'-0"	13'-5"	12'-9"	12'-2"	11'-6"	10'-1"	10'-3"	9'-8"	9'-0"	8'-5"	7'-9"	7'-2"	6'-10"				38'-2"	34'-9"	30'-4"	25'-10"	21'-6"	17'-1"	12'-7"	8'-3"	3'-10"
	12'	NUMBER	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	2				14	2	2	2	2	2	2	2	2	12'
LENGTH		19'-10"	19'-5"	18'-10"	18'-2"	17'-6"	16'-10"	16'-3"	15'-7"	14'-11"	14'-3"	13'-7"	13'-0"	12'-4"	11'-8"	11'-1"	10'-4"	9'-9"	9'-1"	8'-5"	7'-10"	7'-5"				40'-8"	38'-7"	34'-3"	29'-11"	25'-7"	21'-3"	16'-10"	12'-6"	8'-2"

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	WID 0208-1		

REINFORCING STEEL - 2 WINGS																REINFORCING STEEL - 2 WINGS																				
CLEAR SPAN	CLEAR HEIGHT	SAME FOR ALL DEPTHS OF FILL														SAME FOR ALL DEPTHS OF FILL														CLEAR HEIGHT	CLEAR SPAN					
		45° SKEW														ALL ANGLES OF SKEW																				
		WING C														WING D																				
		J BARS ¾"DIA. 12"C. TO C.IN TOP OF FOOTING 24"C. TO C.IN BOTTOM OF FOOTING														E BARS AT 12"C. TO C. SIZES AS SHOWN FOR WING A								F BARS ½"DIA. AT 12"C. TO C.												
10'	4'														4	4	4	4	4									10	2	2	2					4'
															7'-10"	7'-3"	6'-7"	5'-10"	5'-2"									9'-2"	8'-5"	5'-7"	2'-8"					
	5'														4	4	4	4	4	2								12	2	2	2					5'
															8'-10"	8'-3"	7'-7"	6'-10"	6'-2"	5'-9"								10'-8"	8'-4"	5'-6"	2'-8"					
	6'														4	4	4	4	4	4								12	2	2	2	2				6'
															9'-10"	9'-2"	8'-6"	7'-9"	7'-0"	6'-3"								11'-8"	10'-9"	8'-1"	5'-4"	2'-7"				
	7'														4	4	4	4	4	4	4							12	2	2	2	2	2			
															11'-7"	10'-9"	9'-11"	8'-11"	8'-1"	7'-1"	6'-3"							13'-2"	12'-9"	10'-2"	7'-8"	5'-1"	2'-6"			7'
	8'	10	14	12	16	14	16	12							4	4	4	4	4	4	4	2						14	2	2	2	2	2			8'
		5'-6"	5'-3"	5'-0"	4'-9"	4'-6"	4'-3"	4'-0"							13'-5"	12'-6"	11'-7"	10'-6"	9'-7"	8'-7"	7'-7"	7'-1"						14'-8"	13'-0"	10'-4"	7'-9"	5'-2"	2'-7"			
9'	10	12	8	12	12	12	12	12						4	4	4	4	4	4	4	4						14	2	2	2	2	2	2		9'	
	6'-0"	5'-9"	5'-6"	5'-3"	5'-0"	4'-9"	4'-6"	4'-3"	4'-0"					14'-11"	14'-0"	12'-11"	11'-10"	10'-9"	9'-9"	8'-7"	7'-7"						15'-8"	15'-2"	12'-8"	10'-1"	7'-7"	5'-0"	2'-7"			
10'	10	8	10	12	8	10	12	12	8	10	8			4	4	4	4	4	4	4	4	2					16	2	2	2	2	2	2		10'	
	6'-6"	6'-3"	6'-0"	5'-9"	5'-6"	5'-3"	5'-0"	4'-9"	4'-6"	4'-3"	4'-0"			16'-7"	15'-7"	14'-6"	13'-4"	12'-2"	11'-1"	10'-1"	8'-9"	8'-2"				16'-8"	14'-10"	12'-5"	9'-11"	7'-6"	5'-0"	2'-6"				
11'	10	8	10	8	10	8	10	8	10	8	10	8	10	4	4	4	4	4	4	4	4	4	2			16	2	2	2	2	2	2	2			
	7'-0"	6'-9"	6'-6"	6'-3"	6'-0"	5'-9"	5'-6"	5'-3"	5'-0"	4'-9"	4'-6"	4'-3"	4'-0"	18'-1"	17'-1"	15'-11"	14'-10"	13'-7"	12'-5"	11'-3"	10'-2"	8'-11"	8'-4"			18'-2"	17'-6"	15'-0"	12'-6"	10'-0"	7'-6"	5'-0"	2'-6"			
12'	10	8	6	10	8	10	6	8	10	8	6	10	8	10	4	4	4	4	4	4	4	4	4			18	2	2	2	2	2	2	2			
	7'-6"	7'-3"	7'-0"	6'-9"	6'-6"	6'-3"	6'-0"	5'-9"	5'-6"	5'-3"	5'-0"	4'-9"	4'-6"	4'-3"	4'-0"	19'-9"	18'-9"	17'-6"	16'-5"	15'-2"	14'-1"	12'-10"	11'-8"	10'-6"	9'-4"	19'-8"	17'-7"	15'-0"	12'-7"	10'-1"	7'-7"	5'-0"	2'-6"			

		REINFORCING STEEL - 2 WINGS																
CLEAR HEIGHT	CLEAR SPAN	SAME FOR ALL DEPTHS OF FILL														CLEAR HEIGHT	CLEAR SPAN	
		ALL ANGLES OF SKEW																
		WING D																
		J BARS ¾" DIA.																
		12"C. TO C. IN TOP OF FOOTING 24"C. TO C. IN BOTTOM OF FOOTING																
4'																	4'	
5'																		5'
6'																		6'
7'																		7'
8'	0'	6	6	10	6	6	6	6										8'
		5'-6"	5'-3"	5'-0"	4'-9"	4'-6"	4'-3"	4'-0"										
9'		6	6	6	4	6	6	6	2									9'
		6'-0"	5'-9"	5'-6"	5'-3"	5'-0"	4'-9"	4'-6"	4'-3"	4'-0"								
10'		6	6	4	6	2	6	4	6	2	6	4						10'
		6'-6"	6'-3"	6'-0"	5'-9"	5'-6"	5'-3"	5'-0"	4'-9"	4'-6"	4'-3"	4'-0"						
11'		6	4	6	2	6	4	2	6	4	6	2	4	6				11'
		7'-0"	6'-9"	6'-6"	6'-3"	6'-0"	5'-9"	5'-6"	5'-3"	5'-0"	4'-9"	4'-6"	4'-3"	4'-0"				
12'		6	4	6	2	4	6	2	4	6	2	4	2	6	4	2		12'
		7'-6"	7'-3"	7'-0"	6'-9"	6'-6"	6'-3"	6'-0"	5'-9"	5'-6"	5'-3"	5'-0"	4'-9"	4'-6"	4'-3"	4'-0"		

GENERAL NOTES

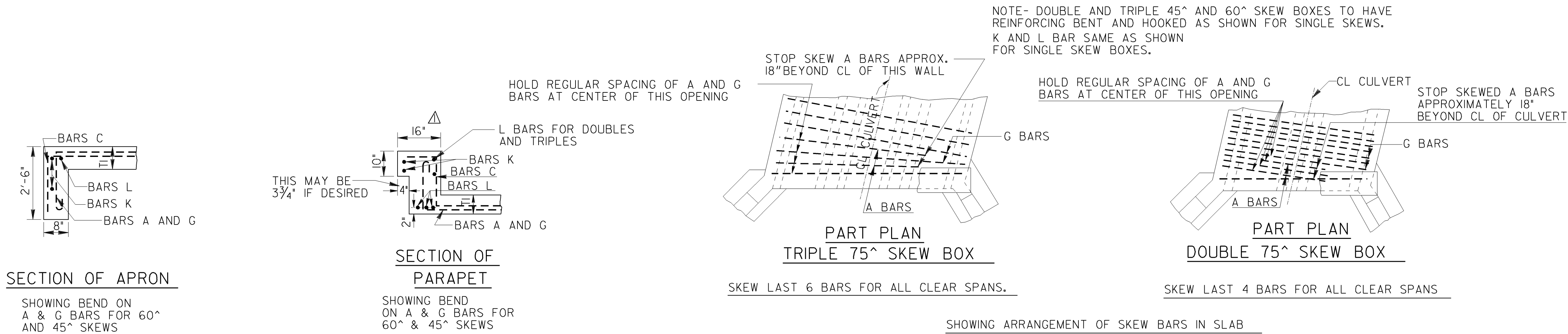
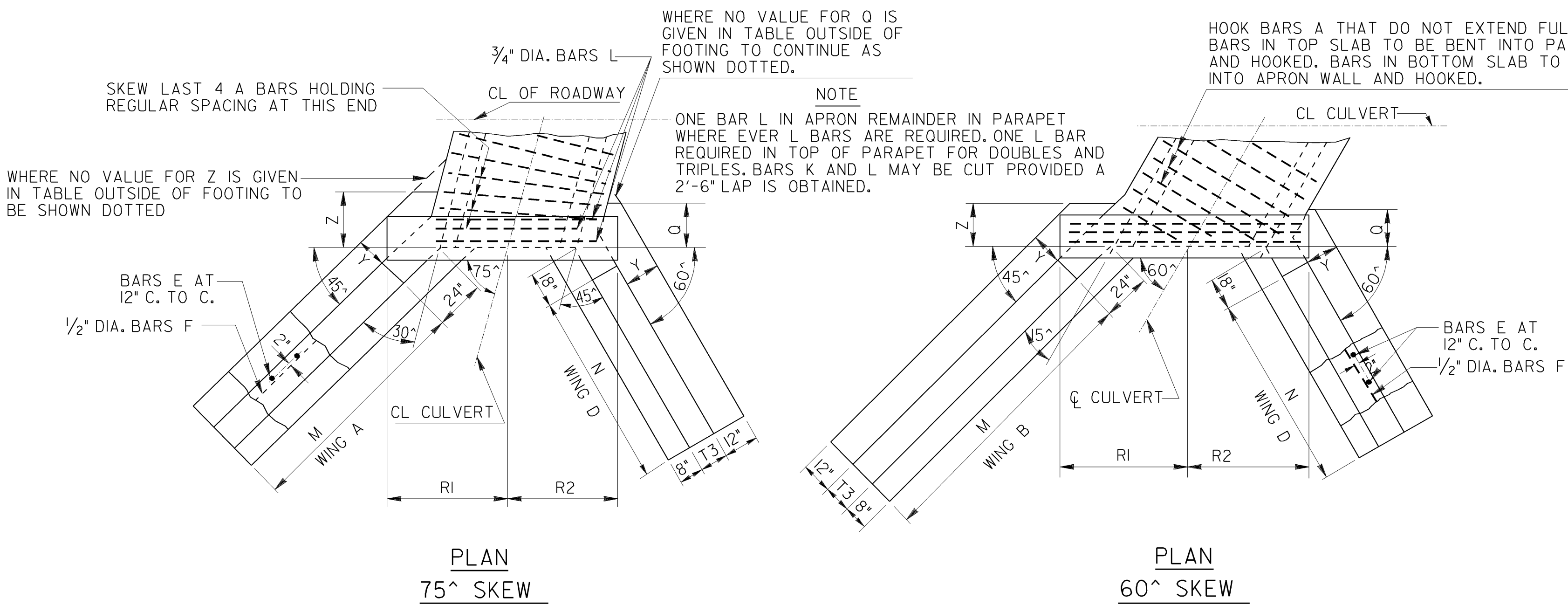
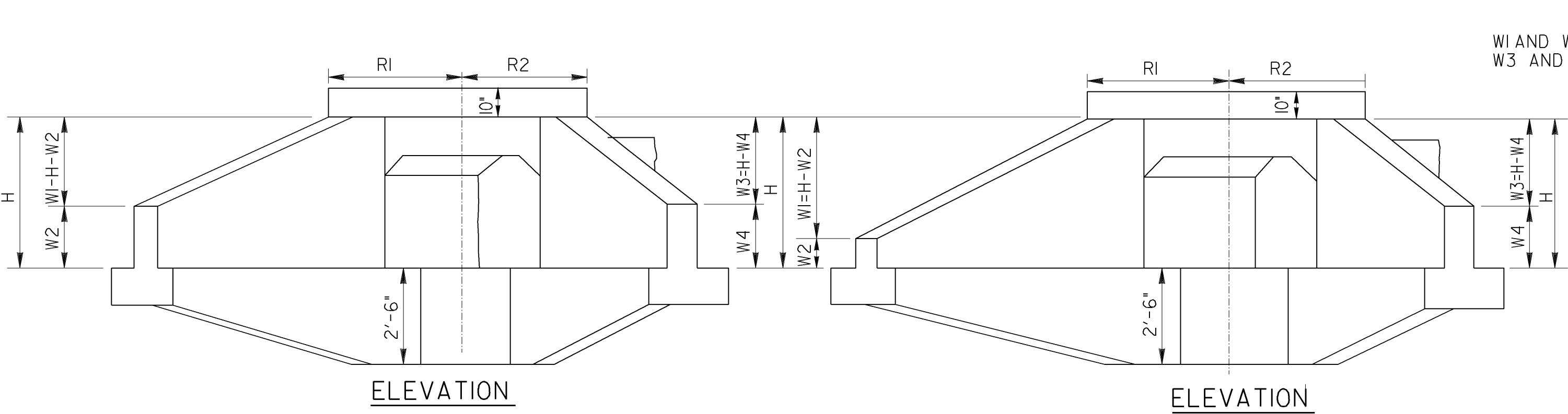
SPECIFICATIONS-GEORGIA STANDARD.

THIS PLAN IS NOT COMPLETE IN ITSELF-FOR GENERAL NOTES, DETAILS AND, DIMENSIONS NOT SHOWN, SEE GEORGIA STANDARD NO. 2324 FOR SINGLE CULVERT, AND GEORGIA STANDARD NO. 2327 FOR DOUBLE AND TRIPLE CULVERTS.

Δ QUANTITIES-WINGWALLS AND PARAPET SEE GEORGIA STANDARD NO. 2331.

QUANTITIES FOR BARREL REMAIN AS SHOWN ON GEORGIA STANDARDS NO. 2324 AND NO. 2327.

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DESIGN DATA			
LOADING-TYPICAL H20S16-44 AND/OR MILITARY SPECIFICATIONS-A.A.S.H.O. 1957, T 58			
DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA			
STANDARD REINFORCED CONCRETE BOX CULVERTS SINGLE 10' X 4' TO TRIPLE 10' X 12' FOR 75°, 60°, AND 45° SKEWS			
NO SCALE REV. & REDR. NOV., 2001			
BY		DESIGNED _____ REDRAWN _____ TRACED _____ CHECKED _____	(SUBMITTED) _____ STATE ROAD & AIRPORT DESIGN ENGINEER (APPROVED) _____ CHIEF ENGINEER
		NUMBER 2330 SHEET 3 OF 4	

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	WID 0208-1		

CLEAR SPAN	CLEAR HEIGHT	DIMENSIONS - WINGS AND PARAPETS																																			
		SAME FOR ALL DEPTHS OF FILL																																			
		SINGLES - DOUBLES - TRIPLES															SINGLES					DOUBLES					TRIPLES					FOR ALL SKEWS					
		75° SKEW					60° SKEW					45° SKEW					75°		60°		45°		75°		60°		45°		75°		60°		45°		N	W4	H
		M	W2	Y	Z	Q	M	W2	Y	Z	Q	M	W2	Y	Z	Q	R1	R2	R1	R2	R1	R2	R1	R2	R1	R2	R1	R2	R1	R2	R1	R2	R1	R2	N	W4	H
0'	4'	10'-0"	2'-4 1/2"	1'-0"			13'-0"	1'-4"	1'-0"	2'-0"		17'-0"	1'-11"	1'-0"	2'-0"		7'-3"	6'-8"	8'-2"	7'-0"	10'-7"	8'-6"	2'-11"	12'-4"	14'-5"	3'-3"	8'-3"	6'-2"	18'-6"	17'-11"	20'-8"	19'-6"	25'-11"	23'-10"	8'-0"	2'-7"	SAME AS SHOWN ON G005-232 & 233
	5'	11'-6"	2'-10"	1'-0"			15'-0"	1'-7"	1'-0"	2'-0"		20'-0"	2'-3"	1'-0"	2'-0"		7'-3"	6'-8"	8'-2"	7'-2"	10'-7"	8'-6"	2'-11"	12'-4"	14'-5"	3'-5"	8'-3"	6'-2"	18'-6"	17'-11"	20'-8"	19'-8"	25'-11"	23'-10"	9'-6"	3'-0 1/2"	
	6'	13'-6"	3'-2 1/2"	1'-0"			17'-0"	1'-10 1/2"	1'-0"	2'-0"		22'-6"	2'-7"	1'-0"	2'-0"		7'-3"	6'-8"	8'-2"	7'-2"	10'-7"	8'-11"	2'-11"	12'-4"	14'-5"	3'-5"	8'-3"	6'-7"	18'-6"	17'-11"	20'-8"	19'-8"	25'-11"	24'-3"	10'-6"	3'-6"	
	7'	16'-0"	3'-4"	1'-9"	2'-6"	1'-6"	20'-0"	1'-9 1/2"	1'-9"	2'-6"	1'-6"	26'-6"	2'-7"	1'-9"	2'-6"	1'-6"	7'-3"	6'-8"	8'-2"	7'-5"	10'-7"	8'-11"	2'-11"	12'-4"	14'-5"	3'-8"	8'-3"	6'-7"	18'-6"	17'-11"	20'-8"	19'-11"	25'-11"	24'-3"	2'-0"	3'-8"	
	8'	17'-6"	3'-10"	2'-6"	3'-0"	2'-0"	22'-6"	2'-2"	2'-6"	3'-0"	2'-0"	29'-0"	3'-0"	2'-6"	3'-6"	2'-0"	7'-6"	6'-8"	8'-4"	7'-5"	10'-11"	8'-11"	13'-3"	12'-5"	14'-8"	3'-9"	8'-9"	6'-9"	18'-11"	18'-1"	21'-1"	20'-2"	26'-6"	24'-6"	3'-6"	4'-2"	
	9'	19'-0"	4'-3"	3'-0"	3'-0"	2'-8"	24'-0"	2'-5"	3'-0"	3'-0"	2'-6"	31'-6"	3'-4"	3'-0"	4'-0"	2'-6"	7'-6"	6'-8"	8'-4"	7'-5"	10'-11"	9'-4"	13'-3"	12'-5"	14'-8"	3'-9"	8'-9"	7'-2"	18'-11"	18'-1"	21'-1"	20'-2"	26'-6"	24'-11"	4'-6"	4'-7 1/2"	
	10'	21'-0"	4'-8"	3'-6"	3'-6"	2'-6"	26'-0"	2'-8 1/2"	3'-6"	3'-6"	2'-6"	34'-0"	3'-8"	3'-6"	4'-6"	2'-6"	7'-6"	6'-8"	8'-4"	7'-9"	10'-11"	9'-4"	13'-3"	12'-5"	14'-8"	4'-1"	8'-9"	7'-2"	18'-11"	18'-1"	21'-1"	20'-6"	26'-6"	24'-11"	5'-6"	5'-1"	
	11'	22'-6"	5'-1"	4'-0"	4'-0"	3'-0"	28'-6"	2'-11 1/2"	4'-0"	4'-0"	3'-0"	36'-6"	4'-0 1/2"	4'-0"	5'-0"	3'-0"	7'-6"	6'-10"	8'-4"	7'-9"	10'-11"	9'-4"	13'-3"	12'-7"	14'-8"	4'-1"	8'-9"	7'-2"	18'-11"	18'-3"	21'-1"	20'-6"	26'-6"	24'-11"	7'-0"	5'-6 1/2"	
12'	24'-0"	5'-6"	4'-6"	4'-6"	3'-0"	30'-6"	3'-3"	4'-6"	4'-6"	3'-0"	39'-0"	4'-4"	4'-6"	5'-0"	3'-0"	7'-6"	7'-0"	8'-7"	7'-9"	10'-11"	9'-4"	13'-3"	12'-9"	14'-11"	4'-1"	8'-9"	7'-2"	18'-11"	18'-5"	21'-4"	20'-6"	26'-6"	24'-11"	8'-6"	6'-0"		

REINFORCING STEEL - 2 PARAPETS																														CLEAR HEIGHT	CLEAR SPAN						
SINGLES												DOUBLES										TRIPLES															
75°						60° SKEW						45° SKEW						75°						60° SKEW								45° SKEW					
K 5/8" DIA.		K 5/8" DIA.		L 3/4" DIA.		K 5/8" DIA.		L 3/4" DIA.		K 5/8" DIA.		L 3/4" DIA.		K 5/8" DIA.		L 3/4" DIA.		K 5/8" DIA.		L 3/4" DIA.		K 5/8" DIA.		L 3/4" DIA.		K 5/8" DIA.		L 3/4" DIA.				K 5/8" DIA.		L 3/4" DIA.			
NO.	LGTH.	NO.	LGTH.	NO.	LGTH.	NO.	LGTH.	NO.	LGTH.	NO.	LGTH.	NO.	LGTH.	NO.	LGTH.	NO.	LGTH.	NO.	LGTH.	NO.	LGTH.	NO.	LGTH.	NO.	LGTH.	NO.	LGTH.	NO.	LGTH.	NO.	LGTH.	NO.	LGTH.				
8	13'-7"	8	14'-10"	10	13'-1"	8	18'-9"	10	16'-2"	8	24'-11"	8	27'-4"	10	25'-7"	8	34'-1"	10	31'-6"	8	36'-1"	8	39'-10"	10	38'-1"	8	49'-5"	10	46'-10"	10	46'-10"	4'					
8	13'-7"	8	15'-0"	10	13'-1"	8	18'-9"	10	16'-2"	8	24'-11"	8	27'-6"	10	25'-7"	8	34'-1"	10	31'-6"	8	36'-1"	8	40'-0"	10	38'-1"	8	49'-5"	10	46'-10"	10	46'-10"	5'					
8	13'-7"	8	15'-0"	10	13'-1"	8	19'-2"	10	16'-2"	8	24'-11"	8	27'-6"	10	25'-7"	8	34'-6"	10	31'-6"	8	36'-1"	8	40'-0"	10	38'-1"	8	49'-10"	10	46'-10"	10	46'-10"	6'					
8	13'-7"	8	15'-3"	10	13'-1"	8	19'-2"	10	16'-2"	8	24'-11"	8	27'-9"	10	25'-7"	8	34'-6"	10	31'-6"	8	36'-1"	8	40'-3"	10	38'-1"	8	49'-10"	10	46'-10"	10	46'-10"	7'					
8	13'-10"	8	15'-5"	10	13'-6"	8	19'-2"	10	16'-8"	8	25'-4"	8	28'-1"	10	26'-2"	8	35'-2"	10	32'-4"	8	36'-8"	8	40'-3"	10	39'-0"	8	50'-8"	10	47'-10"	10	47'-10"	8'					
8	13'-10"	8	15'-5"	10	13'-6"	8	19'-11"	10	16'-8"	8	25'-4"	8	28'-1"	10	26'-2"	8	35'-7"	10	32'-4"	8	36'-8"	8	40'-11"	10	39'-0"	8	51'-1"	10	47'-10"	10	47'-10"	9'					
8	13'-10"	8	15'-9"	10	13'-6"	8	19'-11"	10	16'-8"	8	25'-4"	8	28'-5"	10	26'-2"	8	35'-7"	10	32'-4"	8	36'-8"	8	41'-3"	10	39'-0"	8	51'-1"	10	47'-10"	10	47'-10"	10'					
8	14'-0"	8	15'-9"	10	13'-6"	8	19'-11"	10	16'-8"	8	25'-6"	8	28'-5"	10	26'-2"	8	35'-7"	10	32'-4"	8	36'-10"	8	41'-3"	10	39'-0"	8	51'-1"	10	47'-10"	10	47'-10"	11'					
8	14'-2"	8	16'-0"	10	13'-6"	8	19'-11"	10	16'-8"	8	25'-6"	8	28'-5"	10	26'-2"	8	35'-7"	10	32'-4"	8	37'-0"	8	41'-6"	10	39'-0"	8	51'-1"	10	47'-10"	10	47'-10"	12'					

					DATE	DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA											
					REVISION	STANDARD REINFORCED CONCRETE BOX CULVERTS SINGLE 10' X 4' TO TRIPLE 10' X 12' FOR 75°, 60°, AND 45° SKEWS											
					BY	NO SCALE DESIGNED _____ (SUBMITTED) <i>James A. Karal</i> REDRAWN _____ STATE ROAD & AIRPORT DESIGN ENGINEER TRACED _____ (APPROVED) <i>Paul L. Carlet</i> CHECKED _____ CHIEF ENGINEER											
						NUMBER 2330 SHEET 4 OF 4											

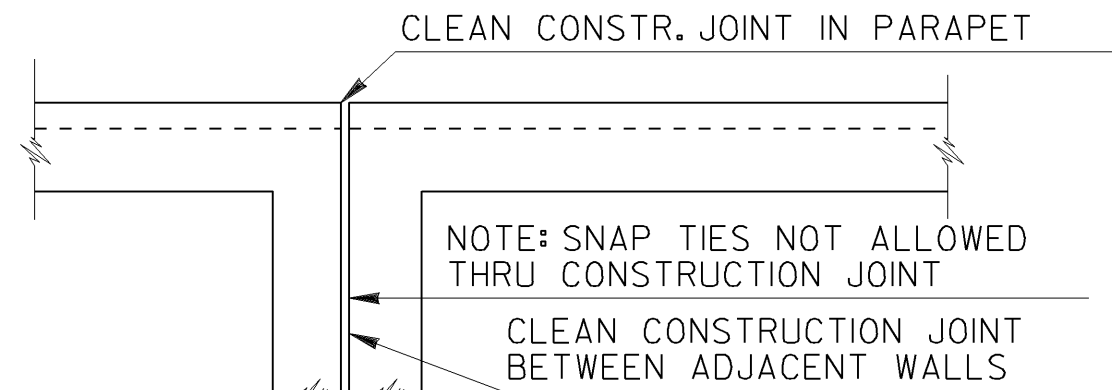
																STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
																GA.	WID 0208-1		

STANDARD NO. 2328																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
CLEAR SPAN	CLEAR HEIGHT	DESIGN 1																CLEAR SPAN	CLEAR HEIGHT	DESIGN 2																CLEAR SPAN	CLEAR HEIGHT																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
		CU. YDS. CLASS A CONCRETE									LBS. BAR REINFORCING STEEL									CU. YDS. CLASS A CONCRETE									LBS. BAR REINFORCING STEEL																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
		SINGLE			DOUBLE			TRIPLE			SINGLE			DOUBLE		TRIPLE				SINGLE			DOUBLE			TRIPLE			SINGLE			DOUBLE		TRIPLE																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
		75°	60°	45°	75°	60°	45°	75°	60°	45°	75°	60°	45°	75°	60°	45°	75°			60°	45°	75°	60°	45°	75°	60°	45°	75°	60°	45°	75°	60°	45°																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
4'	5'	13.45	14.56	17.75							452	586	746																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													</

STANDARD NO. 2329																																									
CLEAR SPAN	CLEAR HEIGHT	DESIGN 1																		CLEAR SPAN	CLEAR HEIGHT	DESIGN 2																		CLEAR SPAN	CLEAR HEIGHT
		CU. YDS. CLASS A CONCRETE									LBS. BAR REINFORCING STEEL											CU. YDS. CLASS A CONCRETE									LBS. BAR REINFORCING STEEL										
		SINGLE			DOUBLE			TRIPLE			SINGLE			DOUBLE			TRIPLE					SINGLE			DOUBLE			TRIPLE			SINGLE			DOUBLE			TRIPLE				
75°	60°	45°	75°	60°	45°	75°	60°	45°	75°	60°	45°	75°	60°	45°	75°	60°	45°	75°	60°	45°	75°	60°	45°	75°	60°	45°	75°	60°	45°	75°	60°	45°	75°	60°	45°						
7'	4'	12.61	13.97	17.03	15.37	17.04	20.08	18.22	20.22	24.68	632	808	1051	765	1053	1391	899	1324	1773	4'	12.83	14.22	17.33	15.76	17.47	21.33	18.79	20.83	25.39	640	839	1094	769	1069	1406	904	1348	1810	7'	4'	
	5'	15.23	16.77	20.31	18.04	19.90	24.16	20.96	23.15	28.13	720	923	1215	854	1122	1481	989	1365	1939	5'	15.46	17.03	20.63	18.59	20.53	24.93	21.64	23.94	29.07	721	954	1258	858	1195	1599	994	1484	2004		5'	
	6'	17.80	19.59	23.65	20.67	22.78	27.58	23.65	26.10	31.63	856	1087	1379	991	1334	1721	1126	1607	2105	6'	18.05	19.87	23.99	21.25	23.45	28.39	24.37	26.93	32.63	857	1118	1422	994	1358	1763	1131	1650	2169		6'	
	7'	23.02	25.16	30.50	26.05	28.54	34.65	29.13	31.97	38.84	1073	1318	1664	1211	1569	2009	1348	1844	2395	7'	23.50	25.72	31.16	26.89	29.52	35.81	30.09	33.11	40.18	1075	1351	1708	1214	1595	2052	1354	1887	2459		7'	
8'	4'	13.21	14.49	17.88	16.40	18.05	22.24	19.65	21.69	26.68	623	901	1183	774	1215	1621	925	1563	2107	4'	13.51	14.83	18.29	16.82	18.53	22.82	20.22	22.33	27.47	625	952	1266	778	1219	1625	931	1569	2121	4'		
	5'	15.82	17.51	21.21	19.07	21.13	25.65	22.39	24.84	30.18	744	1033	1330	896	1363	1783	1047	1712	2278	5'	16.14	17.87	21.65	19.77	21.93	26.62	23.27	25.85	31.40	753	1099	1428	902	1379	1819	1056	1752	2326	5'		
	6'	18.70	20.62	24.83	22.00	24.31	29.34	25.38	28.08	33.95	891	1213	1535	1052	1528	1975	1205	1879	2471	6'	19.04	21.01	25.29	22.74	25.16	30.37	26.31	29.14	35.24	902	1264	1619	1058	1545	2011	1214	1918	2519	6'		
	7'	23.76	26.05	31.50	27.08	29.74	36.04	30.52	33.59	40.74	1102	1433	1813	1254	1745	2245	1408	2096	2741	7'	24.30	26.67	32.25	28.07	30.91	37.42	31.70	34.97	42.37	1103	1481	1891	1260	1761	2283	1417	2136	2792	7'		
9'	8'	28.52	31.15	37.48	32.17	35.23	42.48	35.88	39.36	47.53	2980	3512	4141	3137	3835	4605	3294	4200	5118	8'	28.95	31.64	38.06	32.91	36.10	43.50	36.77	40.39	48.76	2982	3563	4240	3141	3870	4668	3300	4258	5212	8'		
	4'	14.09	15.57	19.04	17.67	19.57	23.95	21.34	23.65	28.95	653	1021	1328	821	1409	1873	989	1839	2476	4'	14.41	15.93	19.48	18.25	20.21	24.74	22.13	24.53	30.03	655	1083	1428	828	1436	1916	999	1880	2544	4'		
	5'	16.39	18.17	21.97	20.03	22.23	26.95	23.76	26.39	32.04	767	1152	1480	936	1541	2012	1105	1972	2616	5'	16.73	18.55	22.43	20.75	23.08	27.98	24.69	27.47	33.36	770	1215	1566	943	1569	2048	1115	2013	2684	5'		
	6'	19.43	21.26	25.90	23.11	25.37	30.95	26.91	29.61	36.13	926	1313	1689	1096	1703	2222	1266	2135	2827	6'	19.83	21.72	26.45	23.90	26.27	32.04	27.90	30.74	37.51	930	1377	1777	1103	1731	2258	1276	2176	2896	6'		
10'	7'	24.50	26.67	32.56	28.24	30.84	37.68	32.10	35.14	42.94	1140	1532	1961	1311	1923	2496	1485	2371	3121	7'	25.16	27.42	33.46	29.42	32.20	39.30	33.53	36.79	44.91	1144	1596	2049	1318	1971	2571	1492	2438	3229	7'		
	8'	29.28	31.82	38.69	33.32	36.33	44.21	37.44	40.93	49.85	2321	2864	3578	2495	3248	4091	2670	3688	4715	8'	29.74	32.33	39.31	34.23	37.39	45.47	38.57	42.23	51.40	2323	2911	3636	2500	3294	4172	2677	3762	4832	8'		
	9'	35.63	38.94	45.80	39.73	43.52	51.41	43.93	48.21	57.16	3593	4334	5101	3769	4719	5657	3944	5106	6286	9'	36.47	39.94	46.94	40.84	44.85	52.92	45.25	49.77	58.96	3597	4383	5202	3773	4765	5740	3951	5238	6406	9'		
	10'	40.05	44.02	51.30	44.22	48.68	57.01	48.50	53.45	62.86	4026	4921	5777	4202	5311	6292	4378	5749	6918	10'	41.41	45.30	52.75	45.93	50.78	59.35	50.46	55.83	65.55	4029	4970	5836	4209	5355	6377	4388	5831	7045	10'		

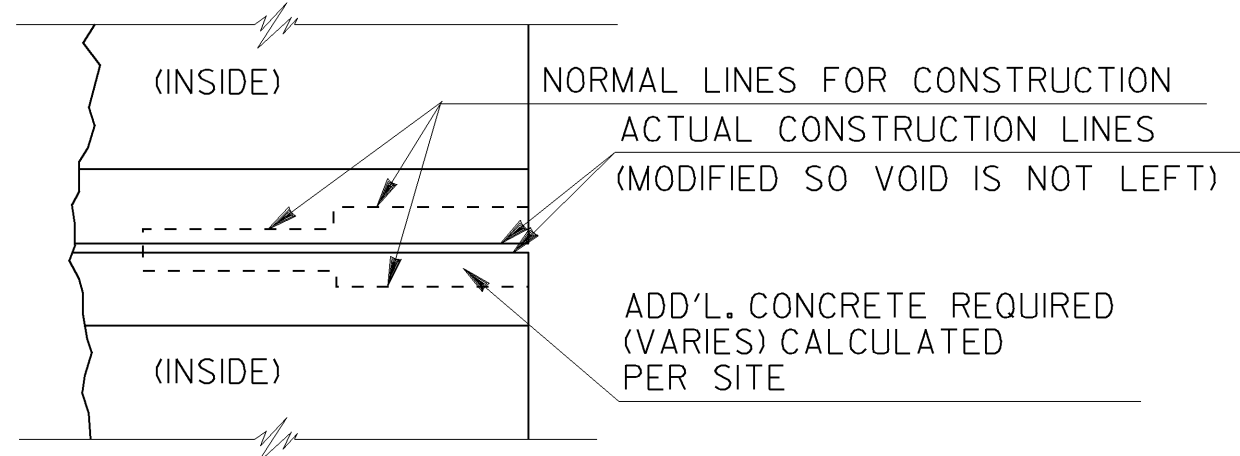
STANDARD NO. 2330																																									
CLEAR SPAN	CLEAR HEIGHT	DESIGN 1																CLEAR SPAN	CLEAR HEIGHT	DESIGN 2																CLEAR SPAN	CLEAR HEIGHT				
		CU. YDS. CLASS A CONCRETE									LBS. BAR REINFORCING STEEL									CU. YDS. CLASS A CONCRETE									LBS. BAR REINFORCING STEEL												
		SINGLE			DOUBLE			TRIPLE			SINGLE			DOUBLE		TRIPLE				SINGLE			DOUBLE			TRIPLE			SINGLE			DOUBLE		TRIPLE							
75°	60°	45°	75°	60°	45°	75°	60°	45°	75°	60°	45°	75°	60°	45°	75°	60°	45°	75°	60°	45°	75°	60°	45°	75°	60°	45°	75°	60°	45°												
10'	4'	15.79	17.44	20.69	19.62	21.62	25.93	23.72	26.20	31.54	713	1177	1477	903	1527	1889	1089	2005	2485		4'	16.19	17.89	21.23	20.26	22.33	26.78	24.59	27.17	32.70	714	1237	1567	908	1639	2070	1097	2175	2769		4'
	5'	18.53	20.38	24.47	22.39	24.66	29.73	26.55	29.31	35.43	868	1322	1654	1058	1673	2066	1246	2151	2663		5'	18.95	20.85	25.03	23.04	25.39	30.61	27.43	30.29	36.62	872	1382	1743	1063	1785	2248	1253	2321	2948		5'
	6'	21.50	23.39	28.09	25.38	27.70	33.39	29.61	32.42	39.17	998	1470	1840	1189	1822	2254	1378	2301	2852		6'	22.11	24.09	28.92	26.22	28.66	34.55	30.68	33.64	40.65	1002	1551	1969	1194	1935	2435	1385	2472	3136		6'
	7'	26.40	28.65	34.39	30.34	33.02	39.78	34.68	37.87	45.71	1203	1713	2152	1396	2066	2567	1585	2547	3166		7'	27.14	29.49	35.39	31.22	34.02	40.98	35.79	39.12	47.23	1207	1794	2281	1400	2197	2748	1593	2717	3450		7'
	8'	35.24	38.61	45.80	39.13	42.92	51.14	43.69	48.03	57.38	2513	3195	3834	2707	3537	4230	2899	4026	4841		8'	35.78	39.21	46.51	39.90	43.79	52.18	44.70	49.15	58.74	2516	3260	3933	2711	3650	4421	2906	4197	5129		8'
	9'	40.43	43.91	52.73	44.28	48.19	58.02	48.92	53.38	64.36	2857	3482	4319	3051	3824	4714	3244	4314	5325		9'	41.29	44.89	53.88	45.42	49.49	59.56	50.35	54.99	66.28	2861	3547	4419	3059	3939	4907	3255	4489	5617		9'
	10'	46.53	50.20	60.18	50.48	54.59	65.61	55.24	59.93	72.12	3842	4577	5533	4037	4921	5929	4231	5421	6542		10'	47.81	51.71	61.88	51.77	56.11	67.34	56.77	61.71	74.18	3846	4642	5634	4045	5066	6162	4242	5627	6902		10'
	11'	53.34	58.10	68.92	57.10	62.26	74.10	61.94	67.67	80.72	4423	5261	6284	4619	5606	6681	4814	6098	7294		11'	54.55	59.54	70.53	58.60	64.02	76.12	63.72	69.75	83.12	4426	5327	6384	4626	5752	6914	4825	6313	7654		11'
12'	60.41	65.95	77.73	64.08	70.00	82.83	69.00	75.50	89.55	5806	6803	8089	6001	7149	8487	6199	7642	9101		12'	61.86	67.70	79.69	65.82	72.09	85.20	71.02	77.90	92.30	5809	6869	8189	6011	7295	8719	6210	7857	9416		12'	

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	WID 0208-1		

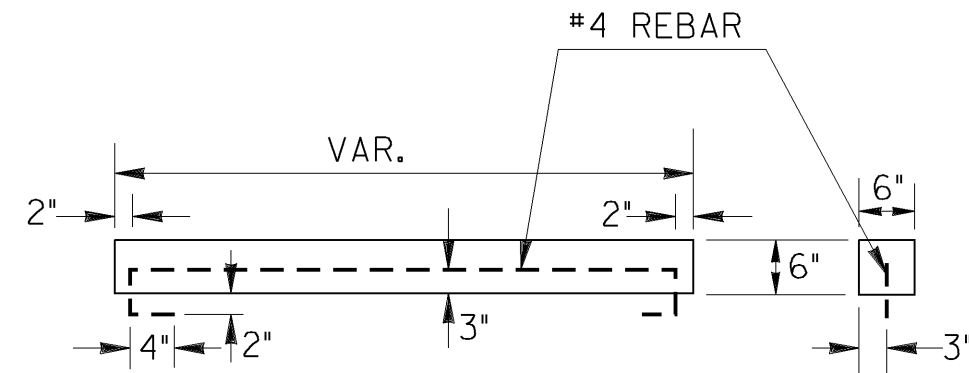


ELEVATION
ADJACENT BOX CULVERT JOINT DETAIL

NOTE: (FOR DETAIL BELOW)
WHERE THE NORMAL OUTSIDE WALLS OF ADJACENT BOX CULVERTS ARE ABUTTING AND THE WALL THICKNESSES NORMALLY VARIES DUE TO INCREASING FILL HEIGHTS, THE MAXIMUM WALL THICKNESS (FOR THE HIGHEST FILL) IS TO BE MAINTAINED FOR THE ABUTTING WALLS FOR THE FULL LENGTH OF THE CULVERT WITH A CLEAN CONSTRUCTION JOINT BETWEEN THE TWO WALLS AS SHOWN. REINFORCING STEEL IS TO REMAIN THE SAME AS NORMAL, WITH DIMENSIONS MEASURED FROM INSIDE OF CULVERT WALL. QUANTITY OF CONCRETE IS INCREASED DUE TO THIS CONSTRUCTION AND IS TO BE CALCULATED FOR INDIVIDUAL SITE. STEEL QUANTITIES ARE UNCHANGED.



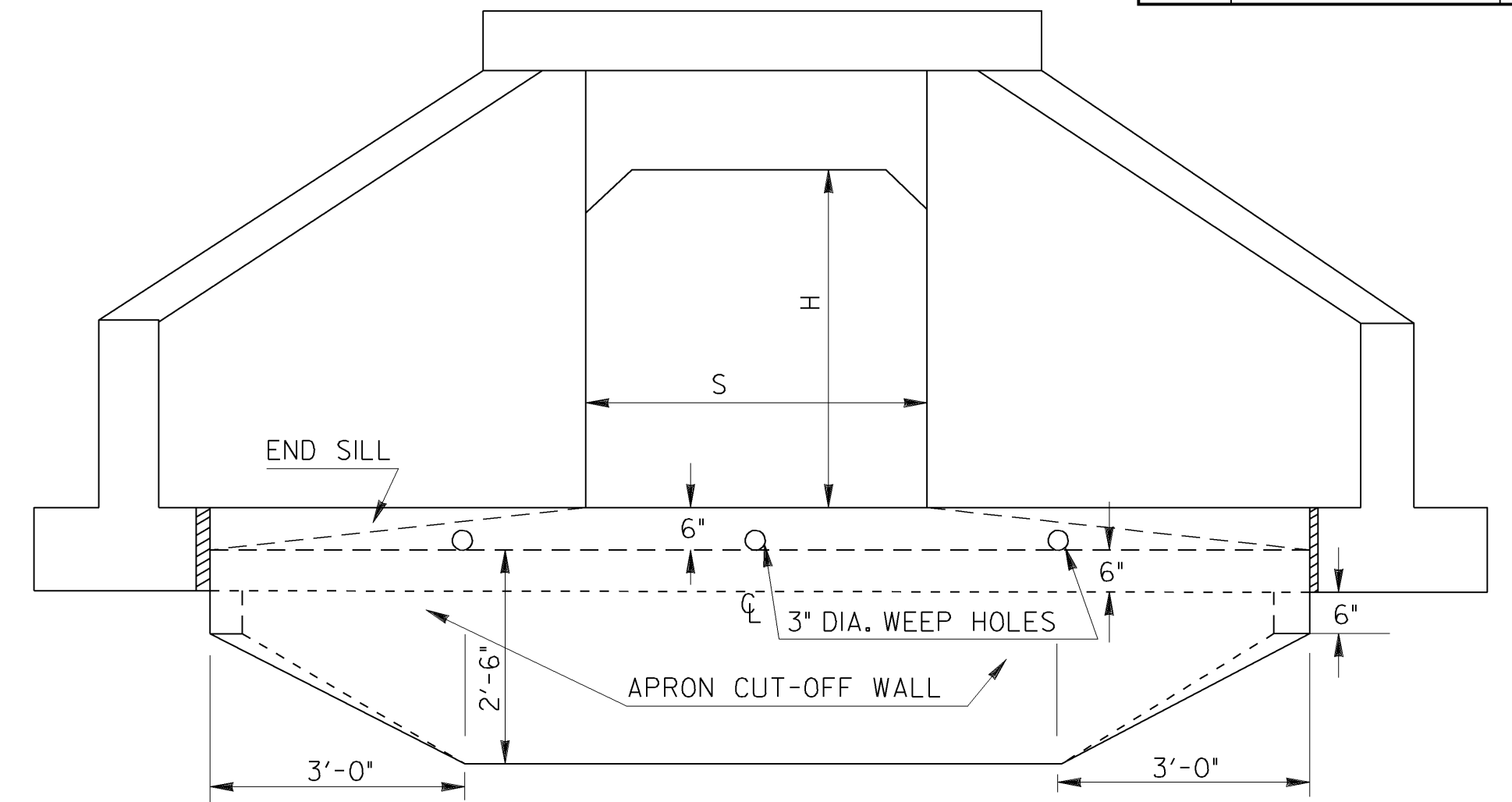
ABUTTING JOINT - TYPICAL PLAN VIEW
(APPLICABLE WHERE NORMAL REQ'D. THICKNESSES OF ABUTTING WALLS WOULD VARY)



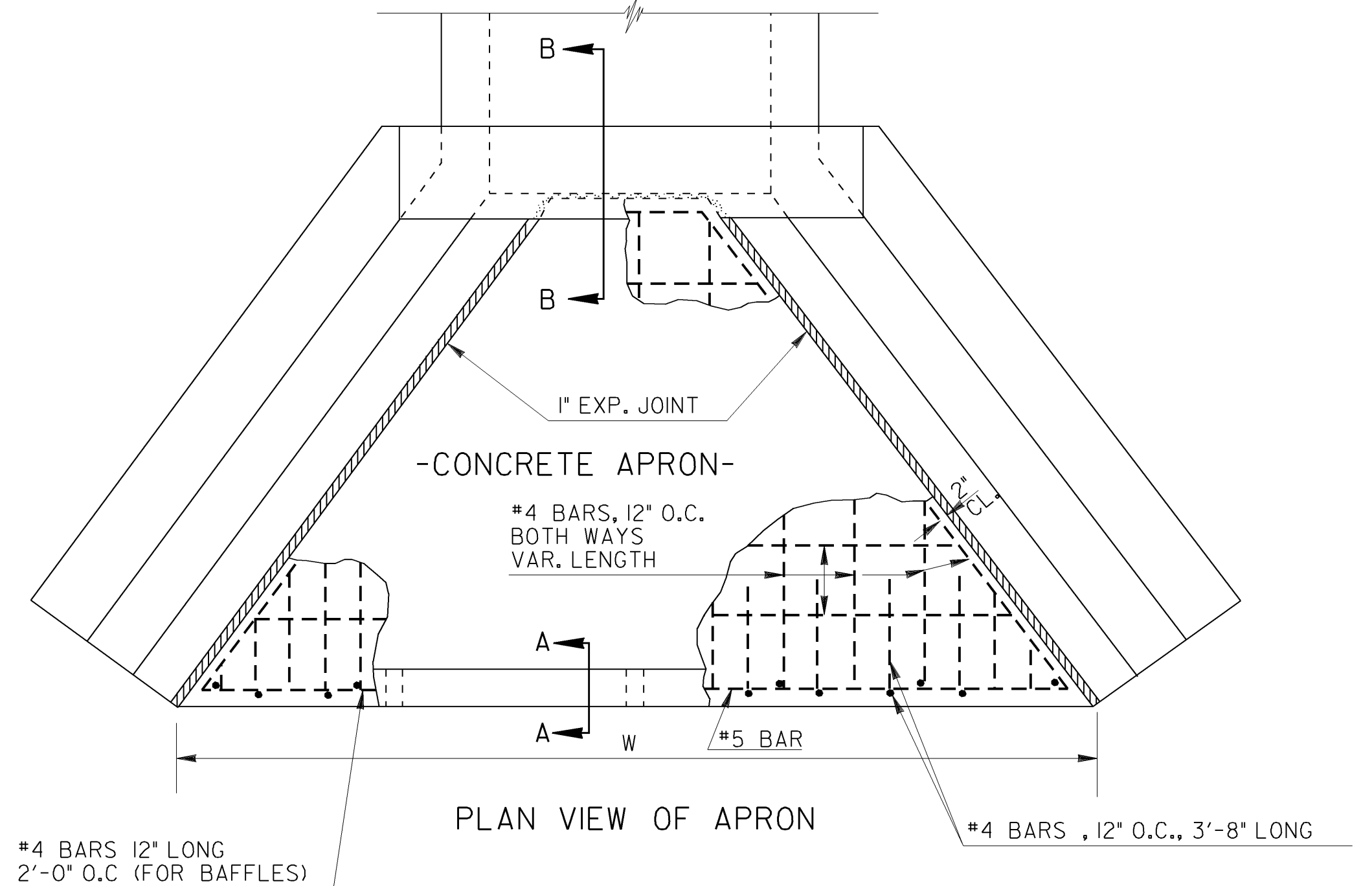
BAFFLE DETAIL

NOTE: BAFFLES SHALL BE CONSTRUCTED FROM CLASS "A" CONCRETE AND MAY BE PRECAST OR POURED IN PLACE.

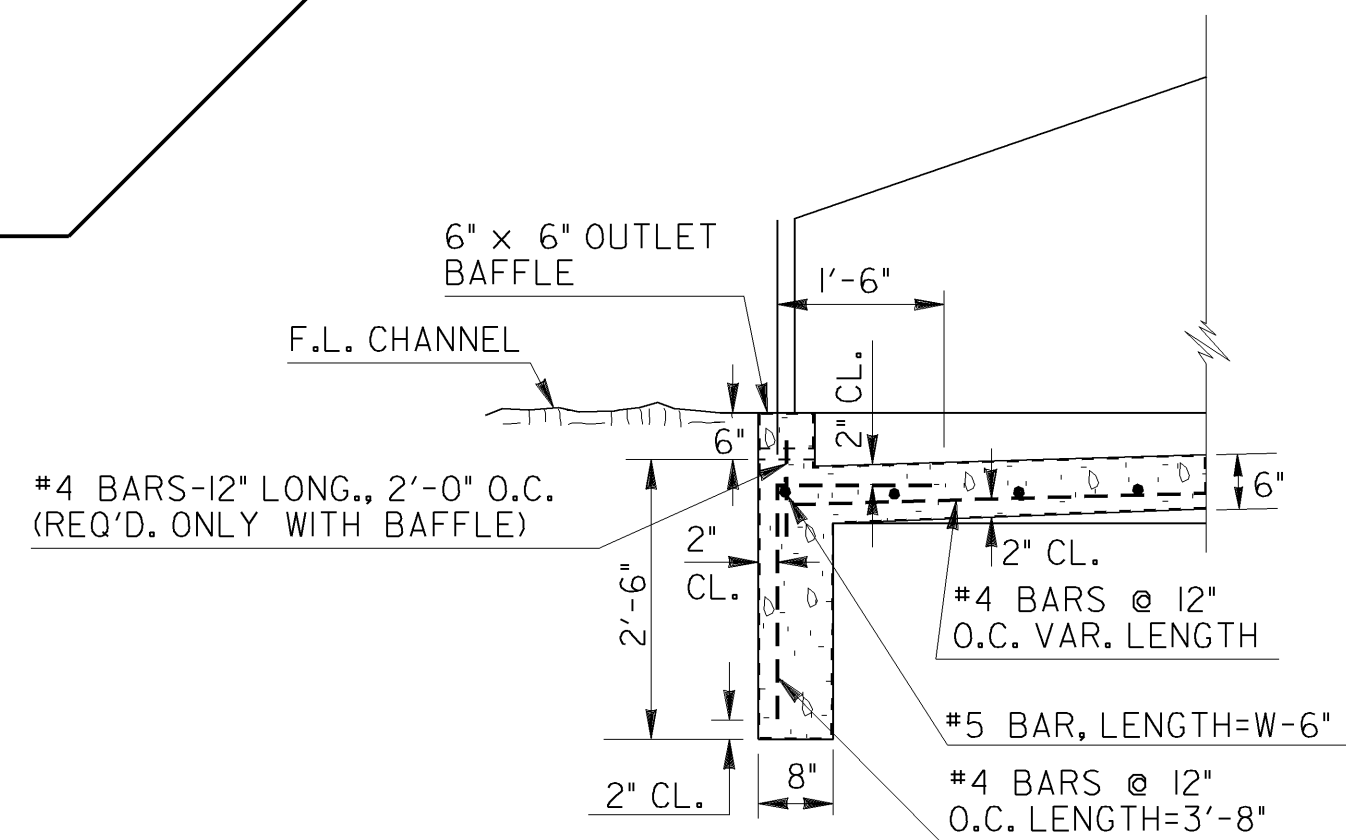
BAFFLES WILL BE USED ON APRONS AT OUTLETS OF PIPES AND BOX CULVERTS AND IN PAVED DITCHES OR ELSEWHERE AT LOCATIONS SHOWN IN THE PLANS OR AS DIRECTED BY THE ENGINEER.



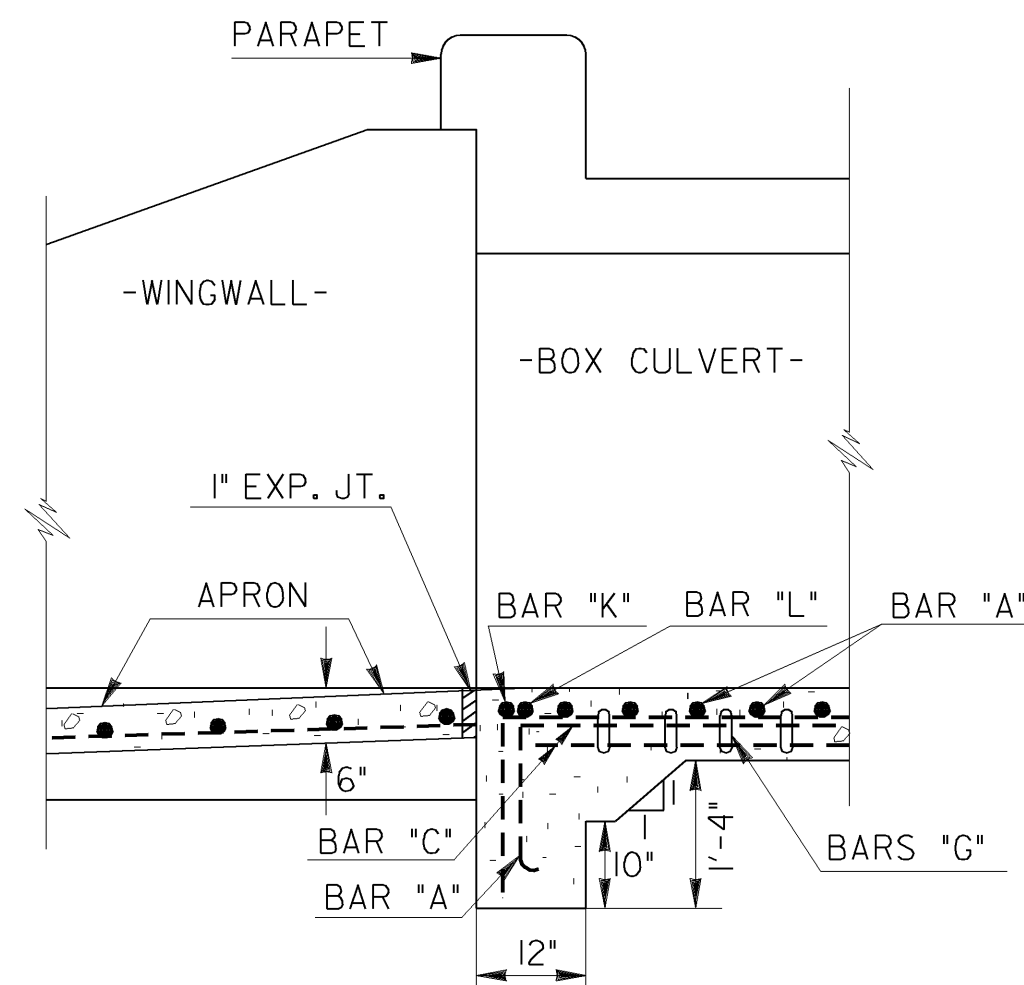
CONCRETE BOX CULVERT APRON - FRONT VIEW



PLAN VIEW OF APRON

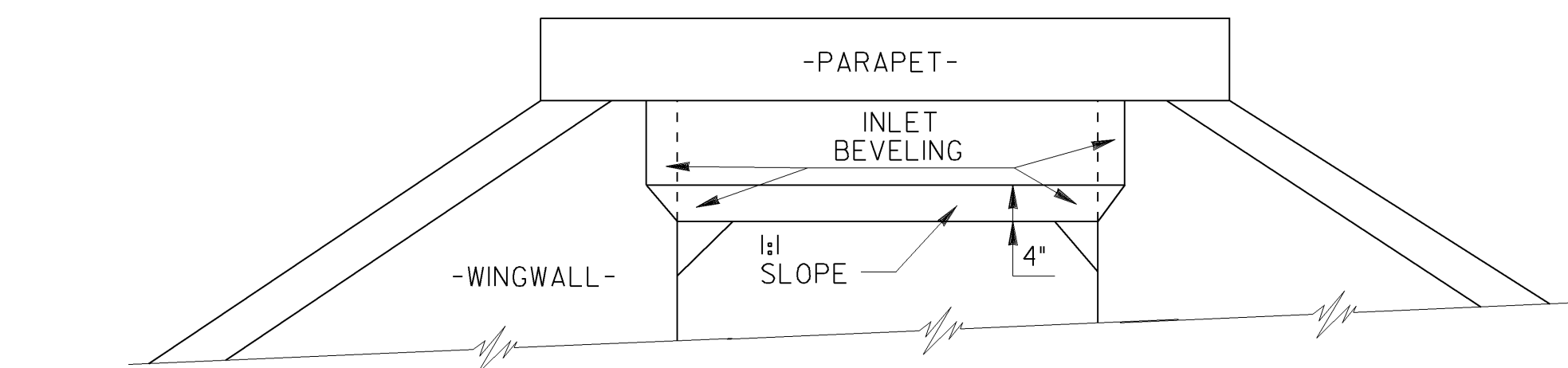


SECTION A-A

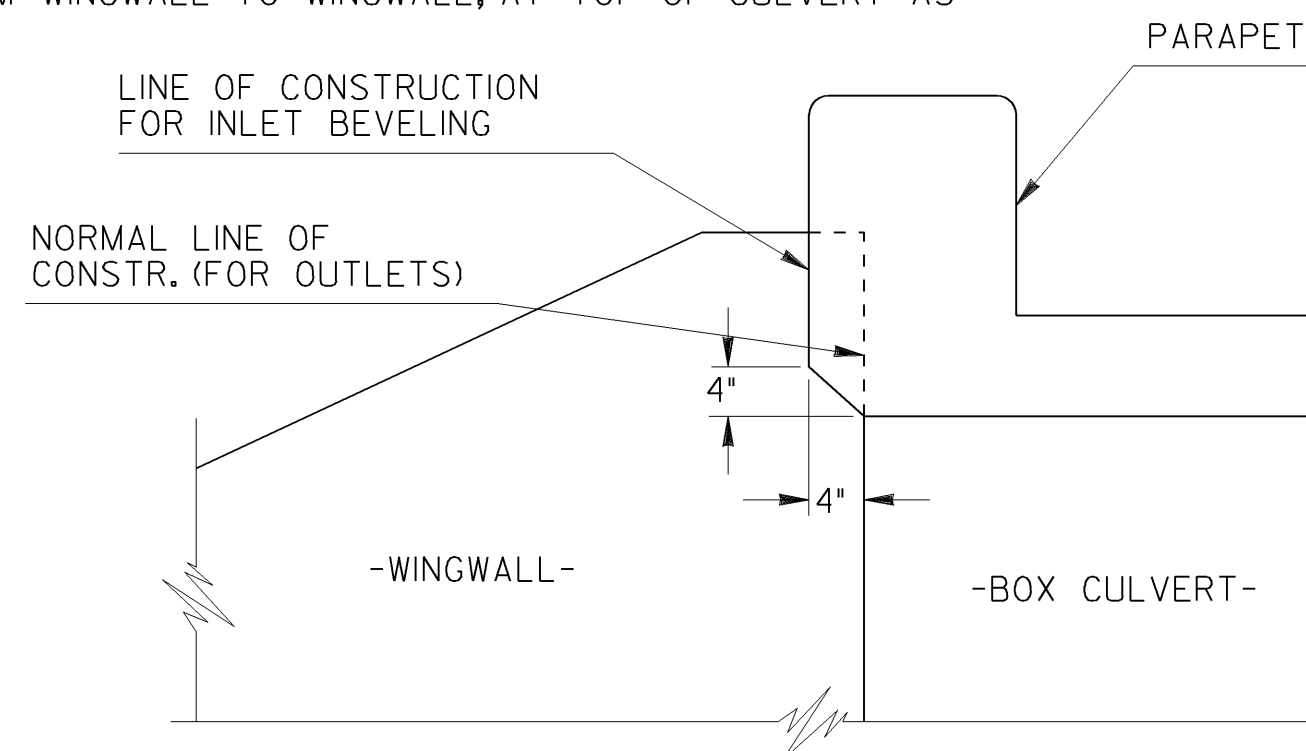


SECTION B-B (TYPICAL)
(SEE GENERAL NOTE NO.4)

NOTE: SEE BOX CULVERT STANDARDS FOR DETAILS NOT SHOWN. K, L, & G BARS REQUIRED ONLY WHERE SPECIFIED. BAR "A" SHOWN BENT INTO CULVERT TOEWALL APPLIES TO SKEWS.



NOTE: INLET BEVELING IS REQUIRED AT THE INLET OF ALL BOX CULVERTS EXTENDING FROM WINGWALL TO WINGWALL, AT TOP OF CULVERT AS SHOWN.



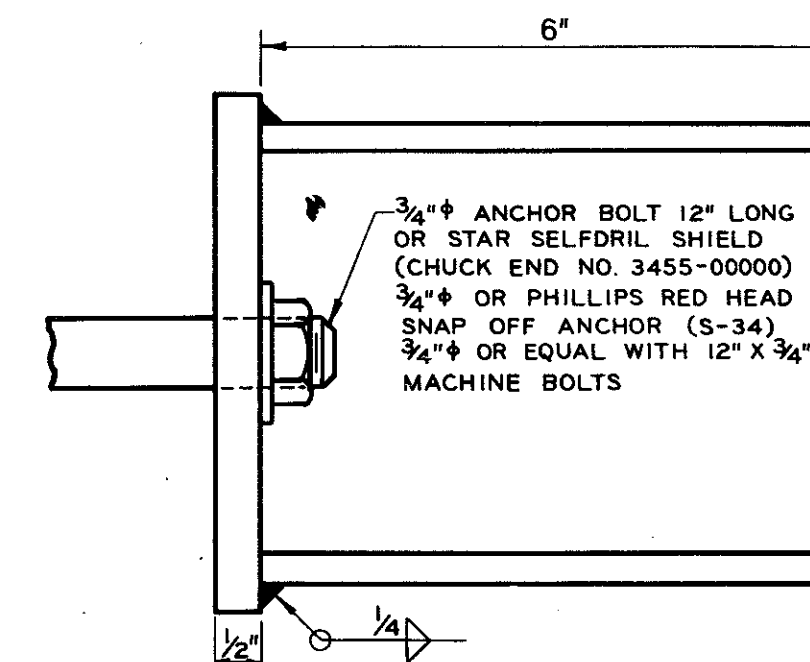
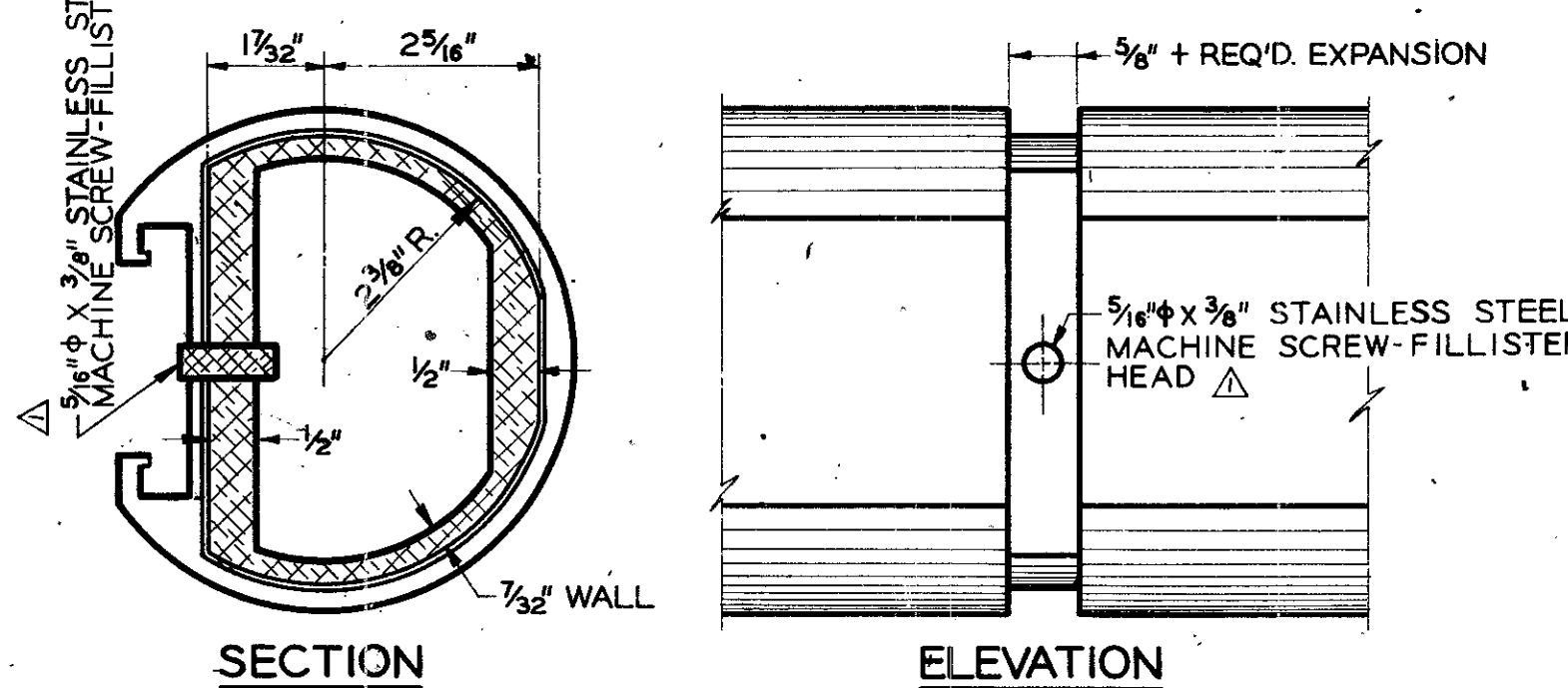
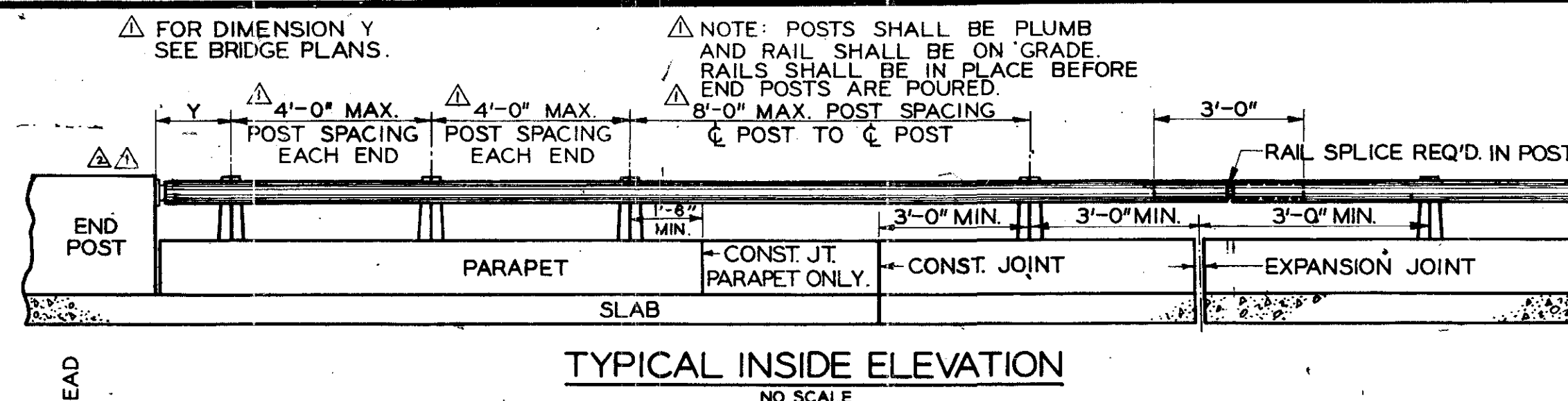
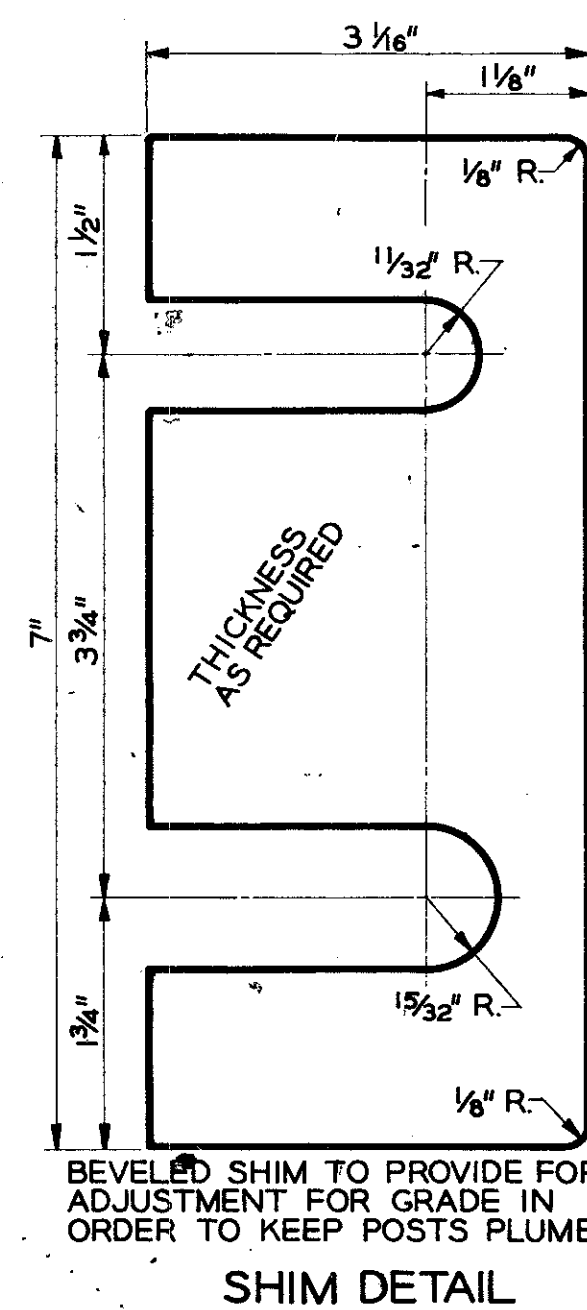
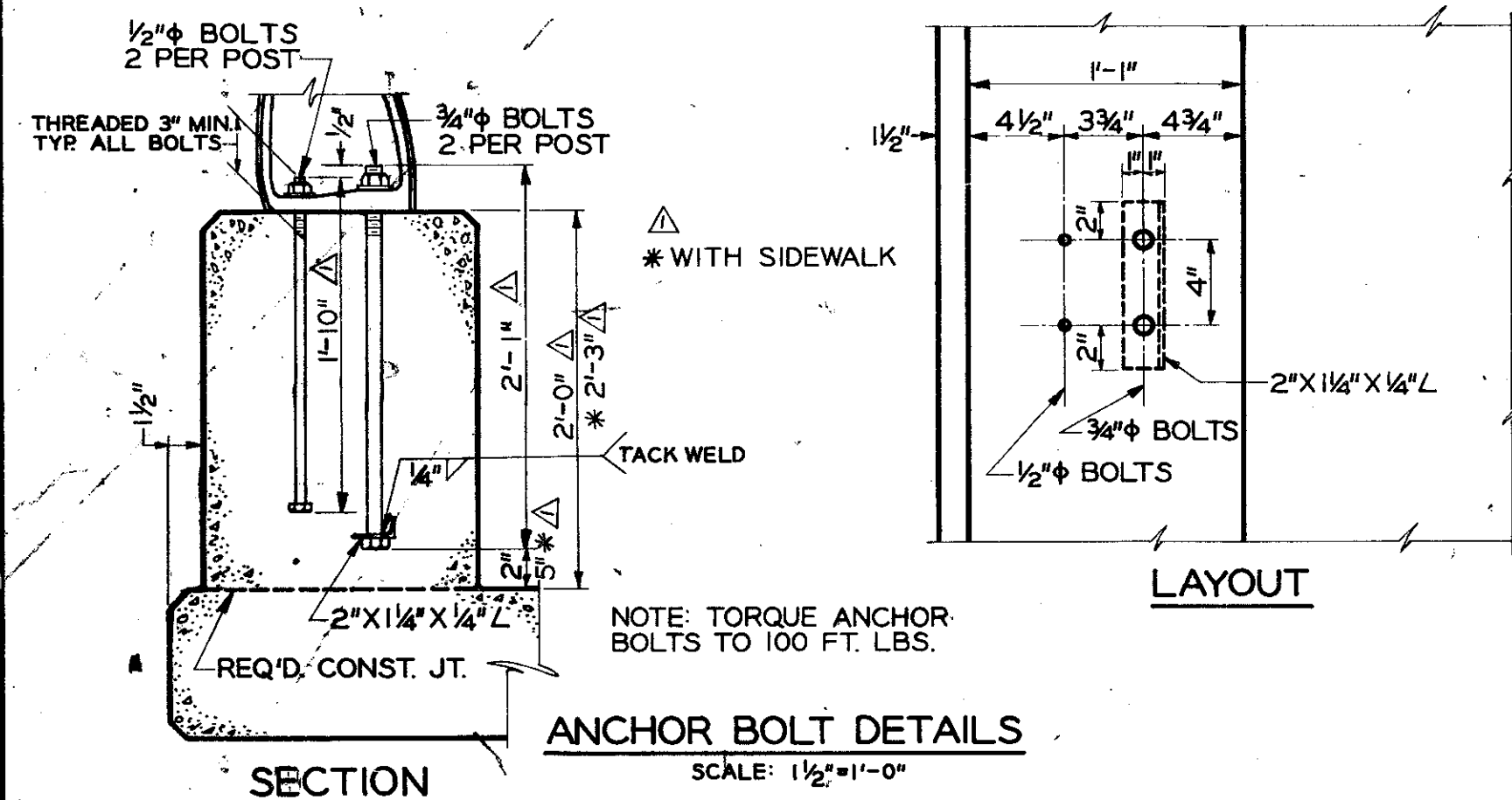
INLET BEVELING DETAIL

6-30-98				DEPARTMENT OF TRANSPORTATION			
7-24-85				STATE OF GEORGIA			
8-14-84							
DATE							
REDRAWN	ADD ABUTTING JT.-TYP. PLAN			STANDARD CONCRETE BOX CULVERT APRONS, BAFFLES, AND INLET BEVELING DETAIL & ADJACENT BOX CULVERTS JOINT DETAIL			
	ADD 4' X 5' QUANTITIES						
	REVISION						
	BY						
NO SCALE			JULY, 1983				
G.J.P.	REV. R.M.U.			(SUBMITTED)		NUMBER	
R.M.U.	TRA. G.M.E.			STATE ROAD & AIRPORT DESIGN ENGR.		2332	
R.M.U.	CHK. J.M.W.			(APPROVED)		SHEET 1 OF 2	
	R.K.C.			STATE HIGHWAY ENGINEER			

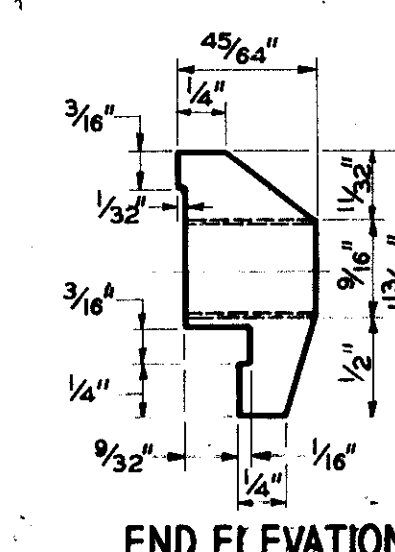
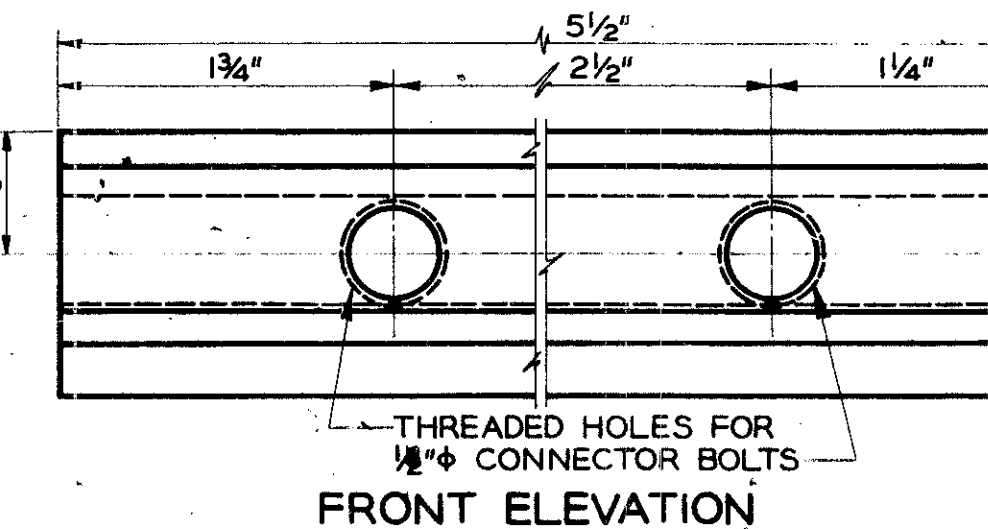
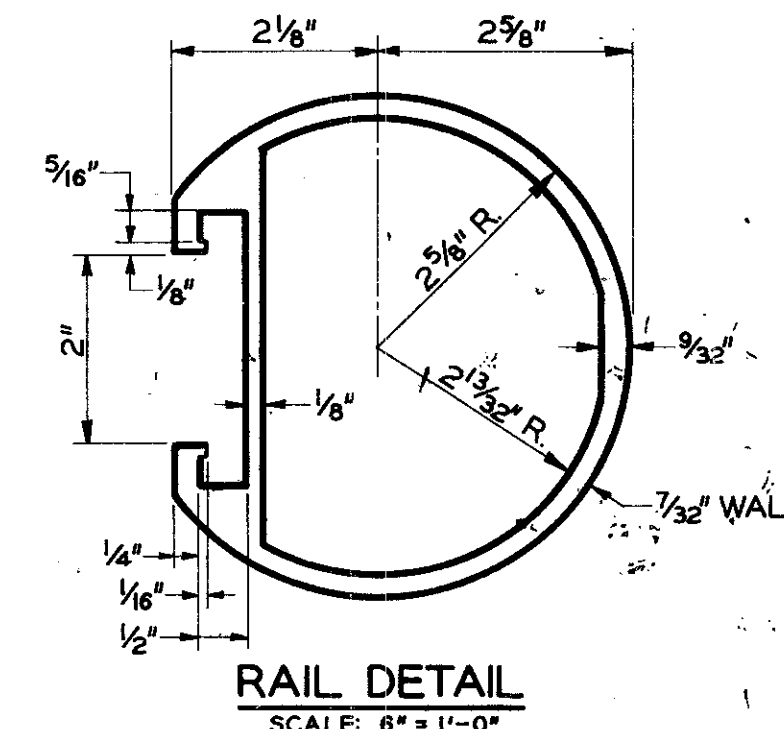
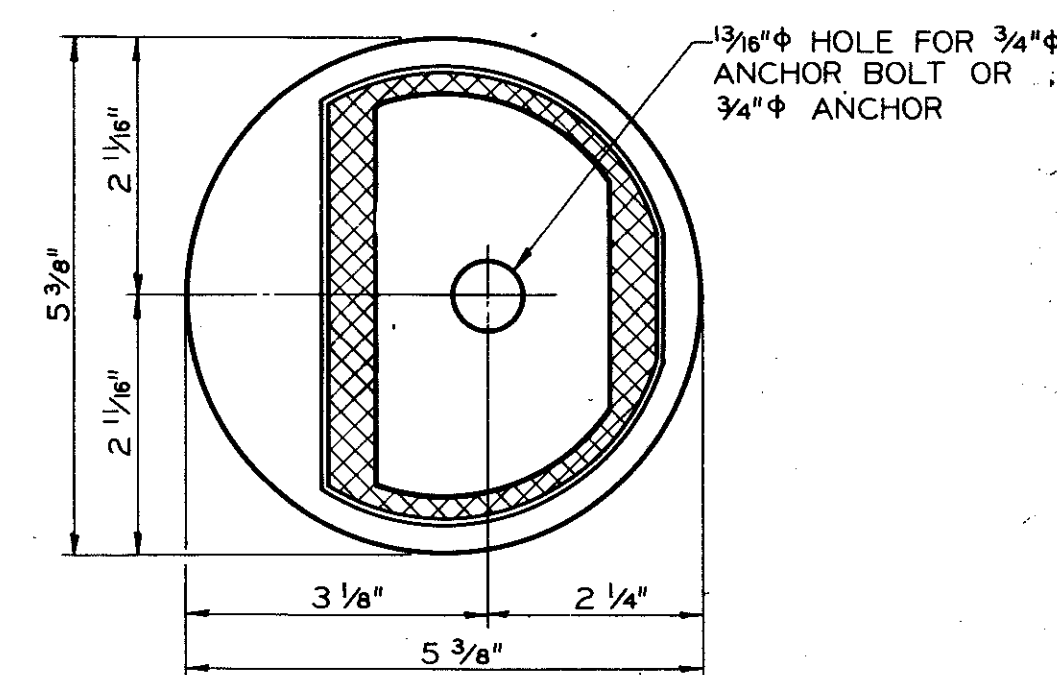
																																STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS				
																																GA.	WID 0208-1						
S	H	APRON QUANTITIES FOR CONCRETE BOX CULVERTS																														H	S						
		SINGLE - 90 °			SINGLE - 75 °			SINGLE - 60 °			SINGLE - 45 °			DOUBLE - 90°			DOUBLE 75°			DOUBLE 60°			DOUBLE 45°			TRIPLE 90°			TRIPLE 75°					TRIPLE 60°			TRIPLE 45°		
		W (F.T.)	CU.YDS. CONC.	LBS. STEEL	W (F.T.)	CU.YDS. CONC.	LBS. STEEL	W (F.T.)	CU.YDS. CONC.	LBS. STEEL	W (F.T.)	CU.YDS. CONC.	LBS. STEEL	W (F.T.)	CU.YDS. CONC.	LBS. STEEL	W (F.T.)	CU.YDS. CONC.	LBS. STEEL	W (F.T.)	CU.YDS. CONC.	LBS. STEEL	W (F.T.)	CU.YDS. CONC.	LBS. STEEL	W (F.T.)	CU.YDS. CONC.	LBS. STEEL	W (F.T.)	CU.YDS. CONC.	LBS. STEEL			W (F.T.)	CU.YDS. CONC.	LBS. STEEL			
4'	4	13.183	1.70	138	14.468	1.91	155	16.469	2.28	183	23.238	3.17	249	17.800	2.59	202	19.297	2.87	223	21.828	3.42	264	29.850	4.67	351	22.466	3.48	266	24.125	3.83	292	27.198	4.56	346	36.415	5.92	447	4	4'
	5	15.000	2.23	173	16.458	2.49	193	19.025	2.96	228	25.958	3.97	300	19.600	3.16	243	21.280	3.51	270	24.380	4.26	327	33.250	5.45	408	-	-	-	-	-	-	-	-	-	-	-	5		
	6	16.733	2.57	202	18.318	2.86	226	21.091	3.47	271	29.387	4.72	364	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6		
5'	4	14.183	1.89	152	15.502	2.11	169	17.616	2.52	200	24.648	3.46	271	19.800	2.97	230	21.366	3.28	253	24.129	3.91	299	32.649	5.13	390	25.466	4.06	308	27.230	4.44	337	30.654	5.29	399	40.654	6.80	510	4	5'
	5	15.983	2.34	185	17.487	2.62	207	20.171	3.19	249	28.002	4.31	333	21.600	3.54	271	23.352	3.92	300	26.678	4.75	362	36.003	6.19	468	27.266	4.75	358	29.216	5.22	394	33.198	6.32	475	44.007	8.06	603	5	
	6	17.783	2.80	219	19.353	3.12	244	22.236	3.77	293	30.798	5.08	390	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6		
6'	4	15.183	2.09	166	16.537	2.32	184	18.763	2.77	218	26.060	3.76	292	21.800	3.35	257	23.436	3.69	282	26.431	4.40	335	35.474	5.72	433	28.466	4.63	349	30.336	5.06	381	34.111	6.02	451	44.893	7.69	574	4	6'
	5	16.983	2.55	200	18.521	2.84	223	21.318	3.46	269	29.414	4.64	357	23.683	3.98	303	25.508	4.40	334	29.074	5.33	404	38.945	6.88	518	30.433	5.43	407	32.495	5.95	446	36.846	7.20	538	48.483	9.11	679	5	
	6	18.783	3.05	238	20.388	3.37	262	23.382	4.08	315	32.209	5.44	416	25.483	4.63	351	27.373	5.07	384	31.134	6.13	462	41.740	7.88	592	32.233	6.23	466	34.360	6.77	506	38.903	8.17	609	51.277	10.33	767	6	
7'	4	17.933	2.75	215	18.173	2.69	211	21.285	3.36	261	29.037	4.44	341	25.766	4.43	335	26.280	4.36	331	30.281	5.39	407	40.097	6.86	516	33.600	6.11	456	34.388	6.03	451	39.301	7.43	554	51.165	9.29	690	4	7'
	5	19.733	3.28	253	20.158	3.25	253	23.447	4.03	310	31.943	5.30	405	27.566	5.13	387	28.266	5.11	386	32.447	6.29	473	43.006	7.99	598	35.400	6.98	520	36.374	6.97	520	41.468	8.55	636	54.076	10.68	792	5	
	6	21.533	3.84	295	21.845	3.75	289	25.414	4.63	355	34.627	6.07	463	29.366	5.87	441	29.950	5.76	434	34.403	7.08	531	45.686	8.98	672	37.200	7.89	586	38.058	7.77	579	43.416	9.54	708	56.754	11.89	881	6	
8'	7	23.333	4.44	339	24.551	4.64	355	28.559	5.73	436	39.099	7.55	572	31.166	6.64	498	32.658	6.91	518	37.547	8.51	636	50.158	10.84	808	39.000	8.84	656	40.765	9.18	682	46.558	11.29	836	61.225	14.13	1045	7	8'
	4	18.933	2.97	230	19.450	2.96	231	22.431	3.62	280	31.463	4.96	379	27.766	4.86	366	28.590	4.86	367	32.583	5.91	445	43.366	7.60	569	36.600	6.75	502	37.733	6.76	504	42.758	8.21	610	55.847	10.37	768	4	
	5	20.733	3.51	270	21.374	3.54	273	24.987	4.41	338	33.802	5.74	437	29.566	5.60	420	30.516	5.65	425	35.131	7.00	524	46.275	8.80	657	38.400	7.69	571	39.659	7.76	577	45.301	9.58	717	58.758	11.86	877	5	
9'	6	22.533	4.10	314	23.299	4.16	319	27.149	5.17	394	36.709	6.71	509	31.366	6.38	478	32.442	6.48	486	37.297	8.01	598	49.185	10.07	750	40.200	8.67	642	41.586	8.80	653	47.468	10.85	803	61.669	13.43	991	6	9'
	7	24.333	4.72	360	25.830	5.00	381	30.101	6.19	470	40.959	8.08	610	33.166	7.21	538	34.970	7.58	567	40.232	9.36	698	53.428	11.82	879	42.000	9.69	716	41.111	9.98	740	50.392	12.52	925	65.907	15.56	1148	7	
	8	26.133	5.39	409	27.752	5.72	434	32.262	7.07	535	43.865	9.21	693	35.133	8.12	605	37.067	8.56	639	42.589	10.56	785	56.573	13.32	989	44.133	10.85	801	46.382	11.41	843	52.942	14.04	1036	69.288	17.44	1284	8	
10'	4	20.533	3.36	259	20.904	3.31	256	24.170	4.08	314	32.978	5.39	411	30.366	5.54	416	31.082	5.49	412	35.481	6.72	503	46.865	8.56	638	40.200	7.72	572	41.261	7.66	569	46.814	9.36	693	60.762	11.73	866	4	10'
	5	22.333	3.95	302	22.409	3.78	290	26.133	4.70	359	35.214	6.08	462	32.166	6.34	474	32.586	6.13	459	37.432	7.58	566	49.101	9.49	707	42.000	8.74	647	42.765	8.48	628	48.757	10.46	773	62.998	12.90	952	5	
	6	24.133	4.57	348	24.514	4.47	342	28.296	5.49	417	38.568	7.20	544	33.966	7.18	536	34.692	7.07	529	39.598	8.65	645	52.455	10.97	815	43.800	9.80	724	44.870	9.67	715	50.925	11.82	872	66.351	14.74	1086	6	
10'	7	25.933	5.23	396	27.048	5.34	406	31.246	6.55	496	42.819	8.62	649	35.766	8.06	600	37.221	8.23	614	42.531	10.07	749	56.698	12.81	950	45.600	10.90	804	47.397	11.12	822	53.846	13.60	1003	70.589	17.01	1252	7	10'
	8	27.733	5.93	448	28.970	6.09	461	33.407	7.46	562	45.724	9.79	735	37.733	9.04	671	39.318	9.27	690	44.888	11.33	841	59.843	14.39	1066	47.733	12.14	895	49.668	12.45	918	56.396	15.21	1120	73.970	18.99	1397	8	
	9	28.933	6.42	484	31.516	7.06	532	36.737	8.73	656	48.818	11.01	824	38.933	9.68	718	41.856	10.52	781	48.182	12.99	963	62.934	15.94	1179	48.933	12.93	952	52.201	13.98	1030	59.666	17.25	1269	77.060	20.86	1533	9	
10'	10	31.033	7.32	550	33.435	7.91	595	39.297	9.89	742	51.724	12.32	921	41.033	10.84	803	43.777	11.60	861	50.737	14.48	1072	65.843	17.58	1299	51.033	14.35	1055	54.124	15.30	1127	62.217	19.07	1402	79.970	22.84	1678	10	10'
	4	22.133	3.78	290	22.542	3.73	287	25.976	4.59	350	34.468	5.83	442	32.966	6.26	468	33.756	6.21	465	38.445	7.59	566	49.778	9.38	697	43.800	8.75	646	44.970	8.69	643	50.935	10.60	782	65.094	12.92	951	4	
	5	23.933	4.40	335	24.349	4.35	332	28.141	5.37	408	37.868	6.97	526	34.766	7.12	531	35.564	7.07	529	40.612	8.69	647	53.178	10.92	810	45.600	9.84	726	46.779	9.79	723	53.102	12.02	885	68.494	14.88	1094	5	
10'	6	25.733	5.06	383	26.272	4.99	380	30.101	6.08	460	40.502	7.83	590	36.566	8.02	596	37.485	7.95	592	42.560	9.66	718	55.804	12.18	866	47.400	10.98	809	48.698	10.91	805	55.043	13.25	975	71.121	16.31	1199	6	10'
	7	26.933	5.52	417	28.805	5.92	448	33.047	7.20	543	44.750	9.32	700	37.766	8.64	642	40.013	9.19	683	45.489	11.18	829	60.047	14.03	1038	48.600	11.76	866	51.225	12.47	917	57.961	15.16	1155	75.356	18.73	1377	7	
	8	28.733	6.24	470	30.606	6.67	503	35.603	8.27	622	47.657	10.54	789	39.733	9.66																								

FED. ROAD DIV. No.	STATE	FED. AID PROJ. No.	STATE AID PROJ. No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
3	GA		WID 0208-1			

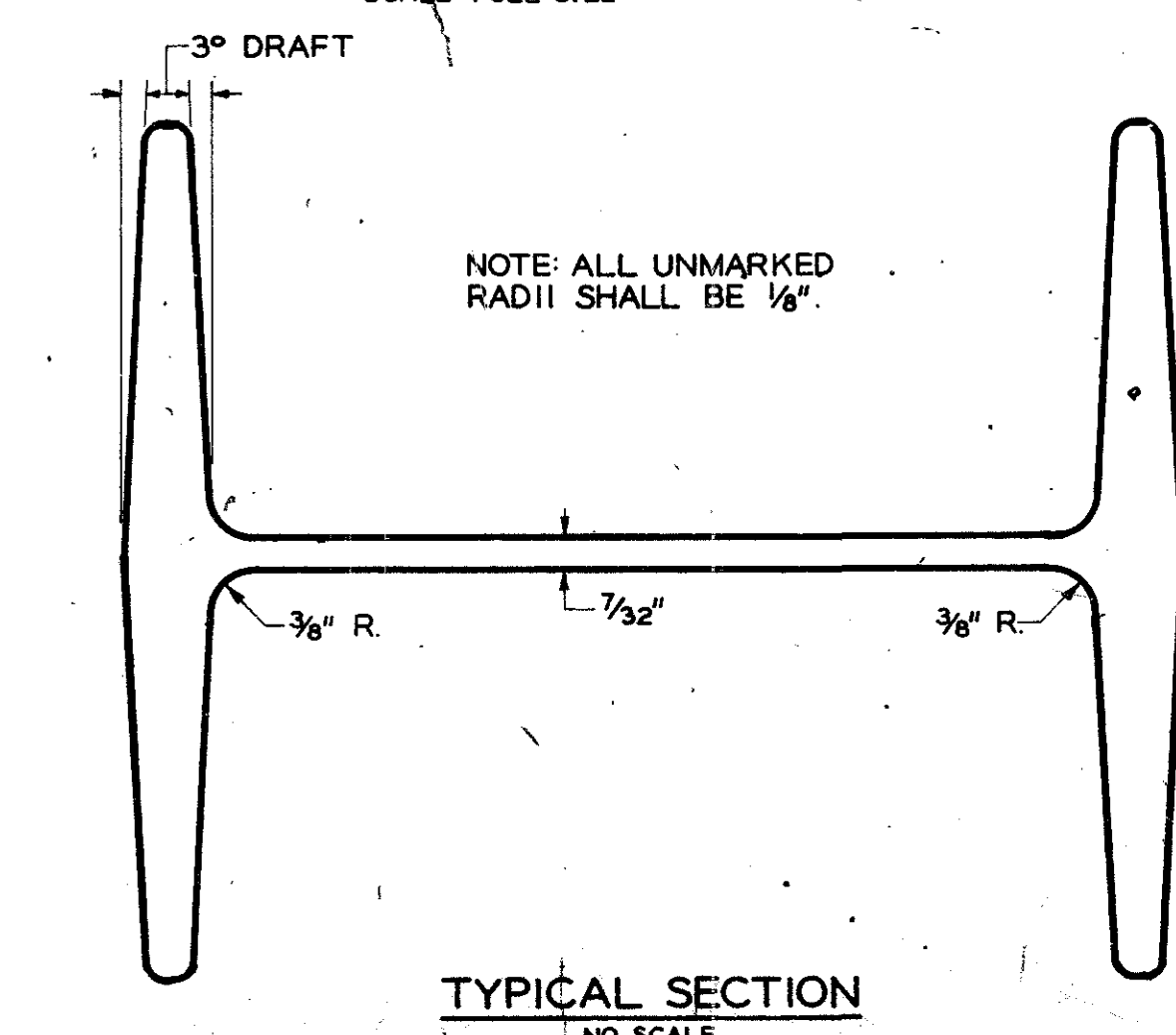
NOTE: ANCHOR BOLTS SHALL BE HOT DIP GALVANIZED BOLTS WITH STD. A.S.R. GALVANIZED HEX NUTS AND ALUMINUM ALLOY WASHERS.



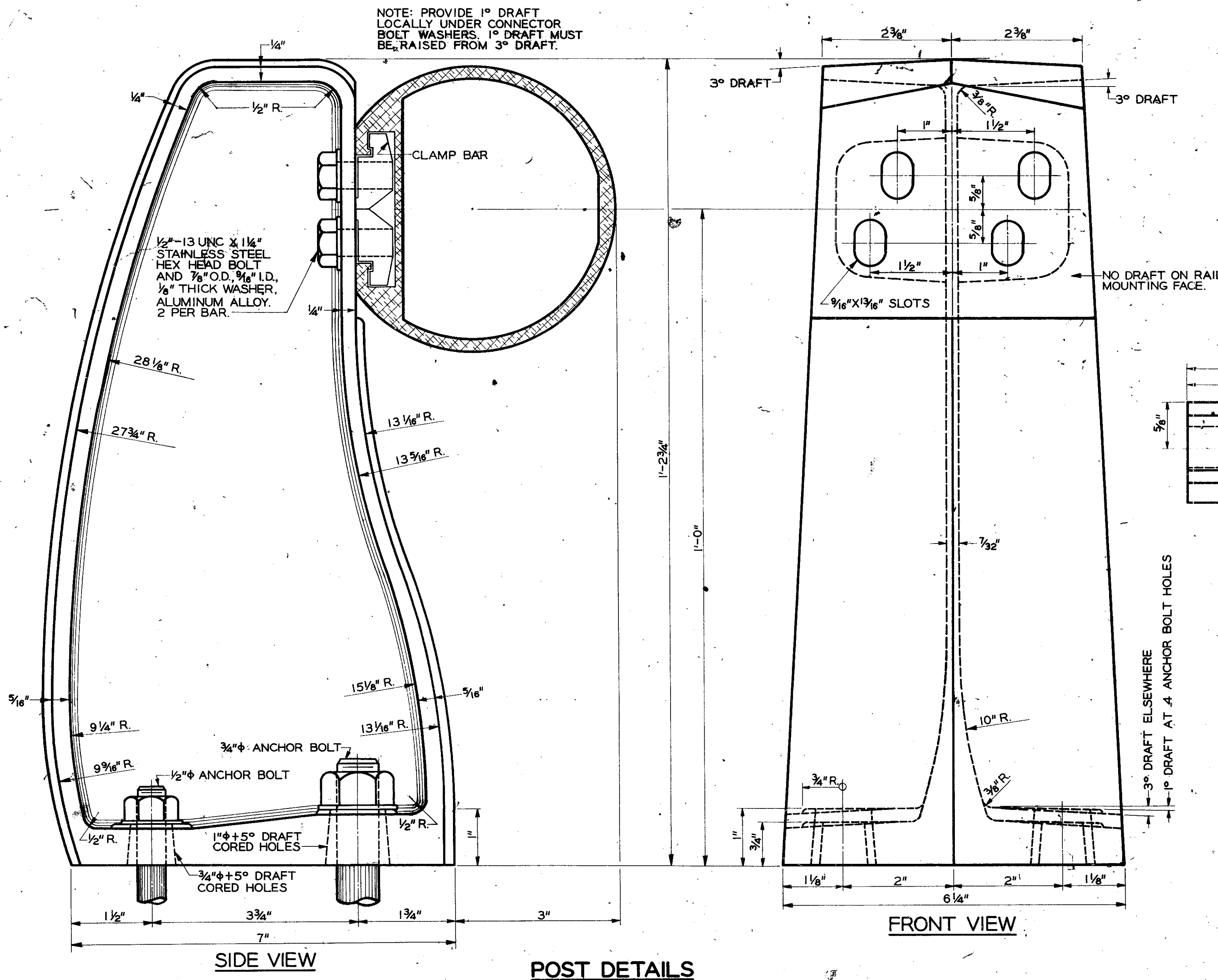
MATERIAL SPECIFICATIONS	
ITEM	MATERIAL
POSTS	ALUM. ALLOY A444-T4
RAILING, CLAMP BAR, SPLICE SLEEVE AND END ATTACHMENT	A.S.T.M. B-221 ALLOY 6061, CONDITION T6
SHIM AND WASHER	A.S.T.M. JSHIM, 1100-0" WASHER, ALCAD 2024-T3
ANCHOR BOLT & NUT	A.S.T.M. A-307 GALV. STEEL
ANCHOR BOLT ANGLE	COMMERCIAL QUALITY
CONNECTOR BOLT	STAINLESS STEEL - A.S.T.M. A 276 TYPE 316 CONDITION A
MACHINE SCREW	STAINLESS STEEL - A.S.T.M. A276 TYPE 316 CONDITION A



CLAMP BAR DETAILS
SCALE: FULL SIZE



TYPICAL SECTION
NO SCALE



POST DETAILS

GENERAL NOTES

SPECIFICATIONS - GEORGIA STANDARD.
RAILING SHALL CONFORM TO HORIZONTAL AND VERTICAL ALIGNMENT. FOR RAILING ON A HORIZONTAL CURVE THE RAIL SHALL CONFORM TO THE CURVE. POSTS SHALL BE VERTICAL.
COST OF ANCHOR BOLTS, CONNECTOR BOLTS, NUTS, WASHERS, CLAMP BARS, SPLICE SLEEVES AND SHIMS SHALL BE INCLUDED IN PRICE BID FOR ALUMINUM RAILING.
RAILS SHALL BE CONTINUOUS OVER A MINIMUM OF 3 POSTS.
OUTER SURFACE OF POST FLANGES, EXCEPT BASE AND RAIL MOUNTING FACES, SHALL HAVE A NO. 36 GRIT FINISH.
1\"/>

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

STANDARD ONE PIPE ALUMINUM HANDRAILING FOR BRIDGES

SCALE: 9\"/>

OCTOBER 1964

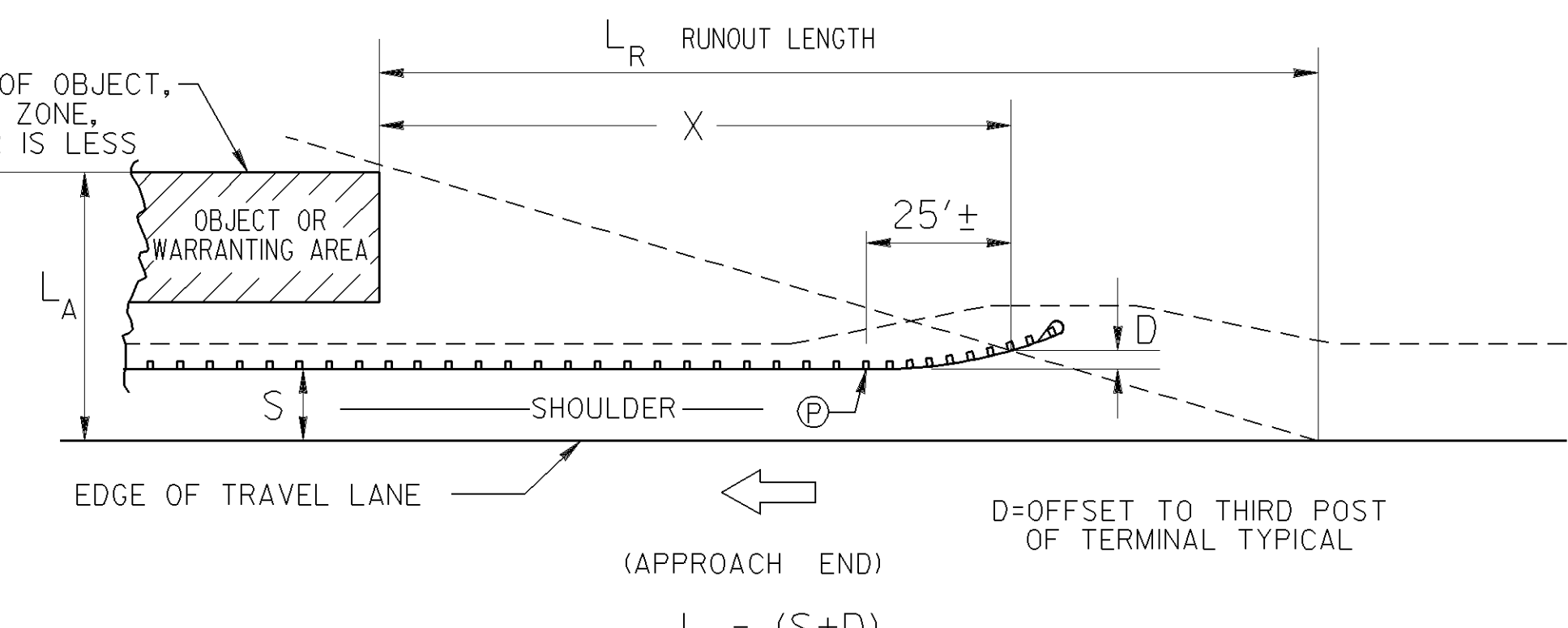
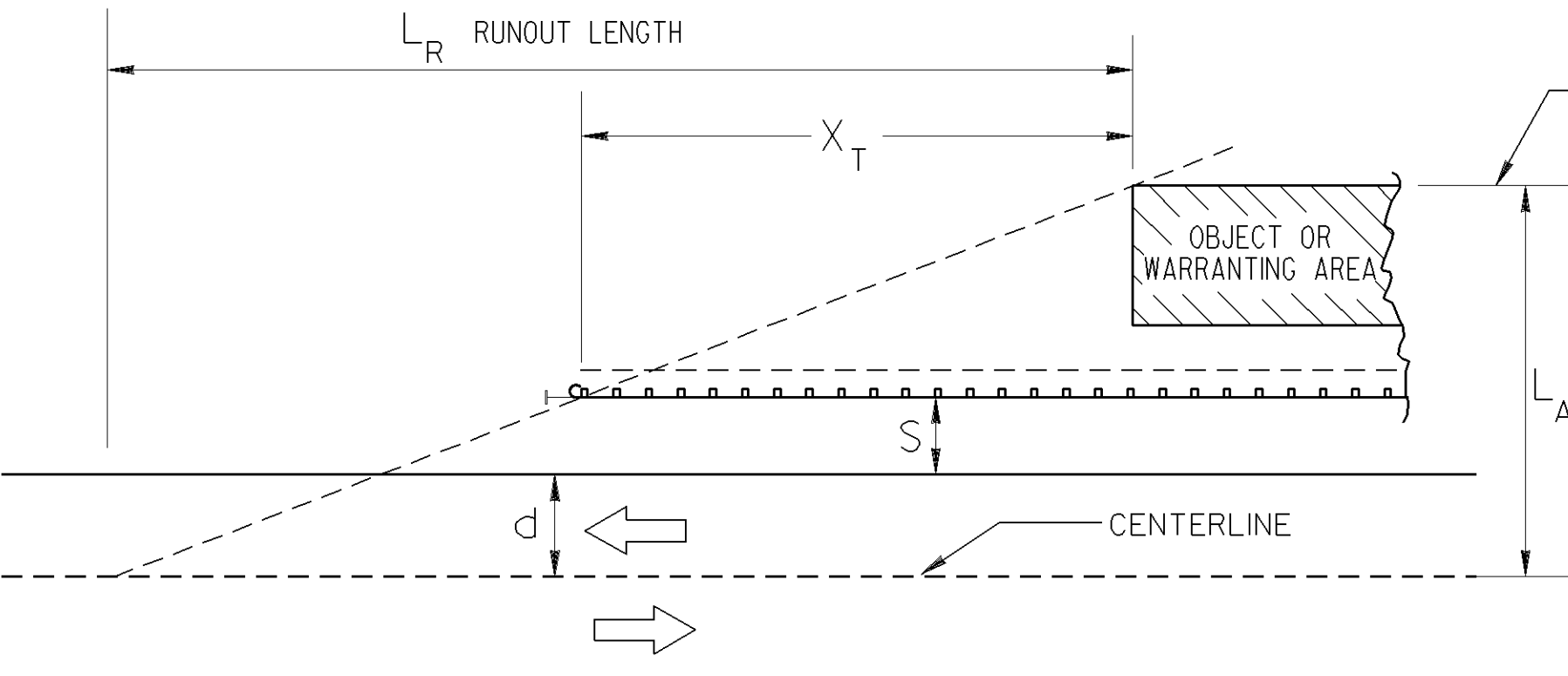
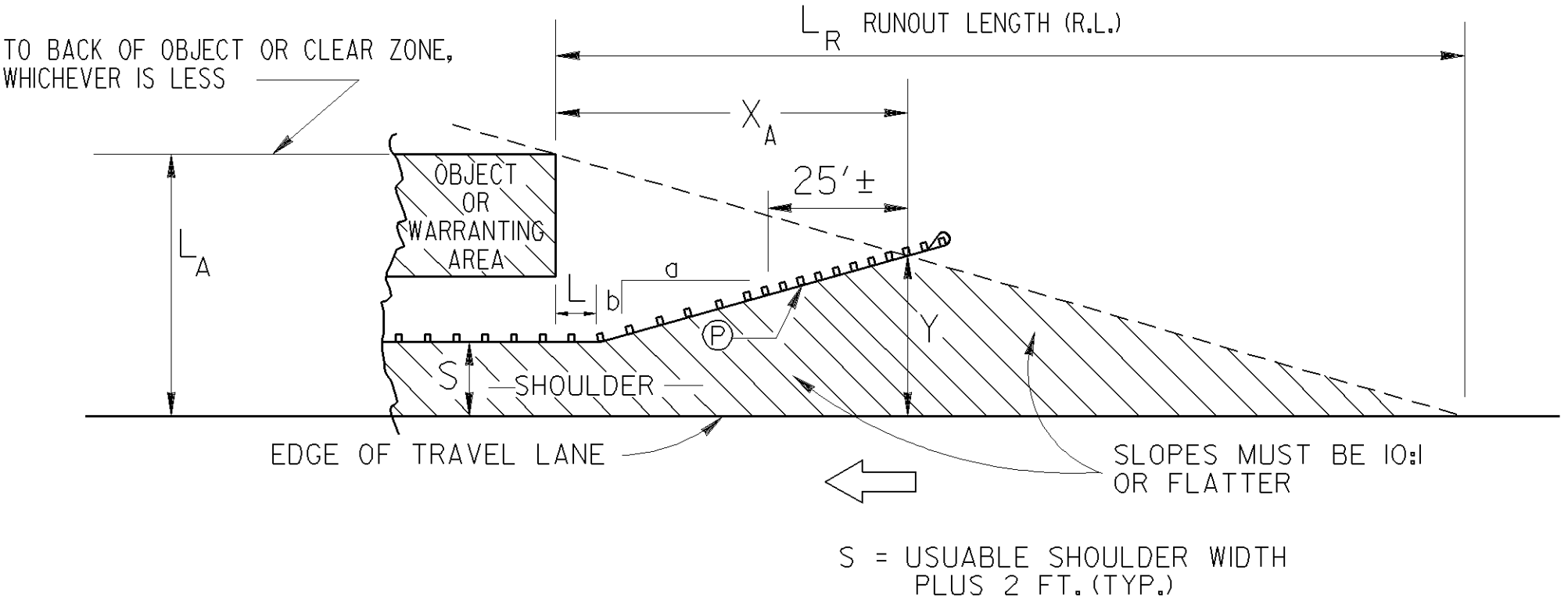
DESIGNED	J.T.K.	SUBMITTED	C.A. Mendenhall	NUMBER	3626
DRAWN	R.M.	APPROVED	M. J. W.		
TRACED	B.J.W.				
CHECKED	J.T.K.				

GUARDRAIL LENGTHS OF ADVANCEMENT AT FIXED OBJECTS OR AT WARRANTING FILL SLOPES TYPICAL

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	WID 0208-1		

(FLARED)

(STANDARD)



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

$$Y = L_A - \frac{L_A}{L_R} (X_A)$$

DESIGN SPEED (MPH)	FLARE RATE a:b
70	15:1
60	14:1
55	12:1
50	11:1
45	10:1
40	8:1
30	7:1

DESIGN SPEED (MPH)	L_R Runout Length in feet	OVER 6000 (A.D.T.)	2000-6000 (A.D.T.)	800-2000 (A.D.T.)	UNDER 800 (A.D.T.)
70	475	445	395	360	
60	425	400	345	330	
55	360	345	315	280	
50	330	300	260	245	
45	260	245	215	200	
40	230	200	180	165	
30	165	165	150	130	

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

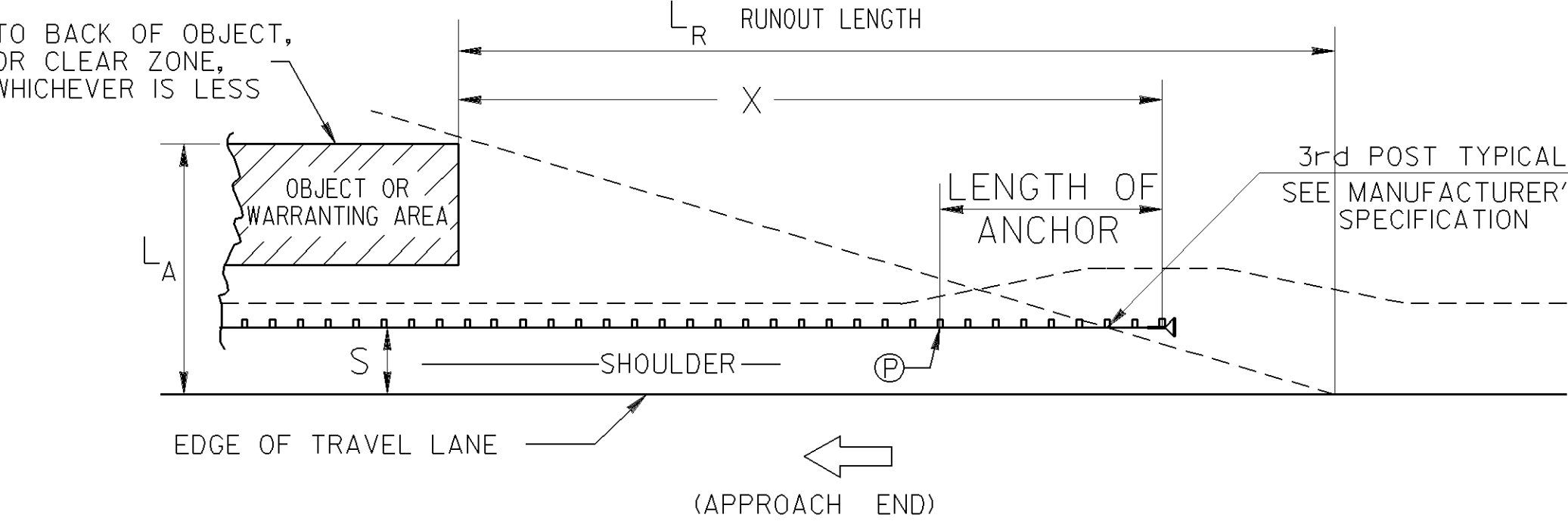
(TRAILING END)

S = USABLE SHOULDER WIDTH PLUS 2 FT. (TYP.)

Ⓟ = POINT OF BEGINNING TERMINAL (TYP.)

$$X = L_R \times \frac{L_A - (S+D)}{L_A}$$

D=FLARE OF TERMINAL
D=0 FOR NON-FLARED TERMINALS



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	**	10-12	10-12	10-12
	1500-6000	12-14	14-16	**	12-14	12-14	12-14
	OVER 6000	14-16	16-18	**	14-16	14-16	14-16
45-50 M.P.H.	UNDER 750	10-12	12-14	**	8-10	8-10	10-12
	750-1500	14-16	16-20	**	12-14	14-16	14-16
	1500-6000	16-18	20-26	**	14-16	16-18	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

* WHERE A SITE SPECIFIC INVESTIGATION INDICATES A HIGH PROBABILITY OF CONTINUING CRASHES, OR 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.

** SINCE RECOVERY IS LESS LIKELY ON THE UNSHIELDED, TRAVERSABLE IV:3H SLOPES, FIXED OBJECTS SHOULD NOT BE PRESENT IN THE VICINITY OF THE TOE OF THESE SLOPES. RECOVERY OF HIGH-SPEED VEHICLES THAT ENCR OACH BEYOND THE EDGE OF THE SHOULDER MAY BE EXPECTED TO OCCUR BEYOND THE TOE OF SLOPE. DETERMINATION OF THE WIDTH OF RECOVERY AREA AT THE TOE OF SLOPE SHOULD TAKE INTO CONSIDERATION RIGHT-OF-WAY AVAILABILITY, ENVIRONMENTAL CONCERNS, ECONOMIC FACTORS, SAFETY NEEDS AND CRASH HISTORIES. ALSO, THE DISTANCE BETWEEN THE EDGE OF THE THROUGH TRAVELED LANE AND THE BEGINNING OF THE IV:3H SLOPE SHOULD INFLUENCE THE RECOVERY AREA PROVIDED AT THE TOE OF THE SLOPE.

HORIZONTAL CURVE ADJUSTMENTS

RADIUS (FEET)	K_CZ (CURVE CORRECTION FACTOR)							
	DESIGN SPEED (MPH)							
	40	45	50	55	60	65	70	
2860	1.1	1.1	1.1	1.2	1.2	1.2	1.3	
2290	1.1	1.1	1.2	1.2	1.2	1.3	1.3	
1910	1.1	1.2	1.2	1.2	1.3	1.3	1.4	
1640	1.1	1.2	1.2	1.3	1.3	1.4	1.5	
1430	1.2	1.2	1.3	1.3	1.4	1.4	1.5	
1270	1.2	1.2	1.3	1.3	1.4	1.5		
1150	1.2	1.2	1.3	1.4	1.5			
950	1.2	1.3	1.4	1.5	1.5			
820	1.3	1.3	1.4	1.5				
720	1.3	1.4	1.5					
640	1.3	1.4	1.5					
570	1.4	1.5						
380	1.5							

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

Where:

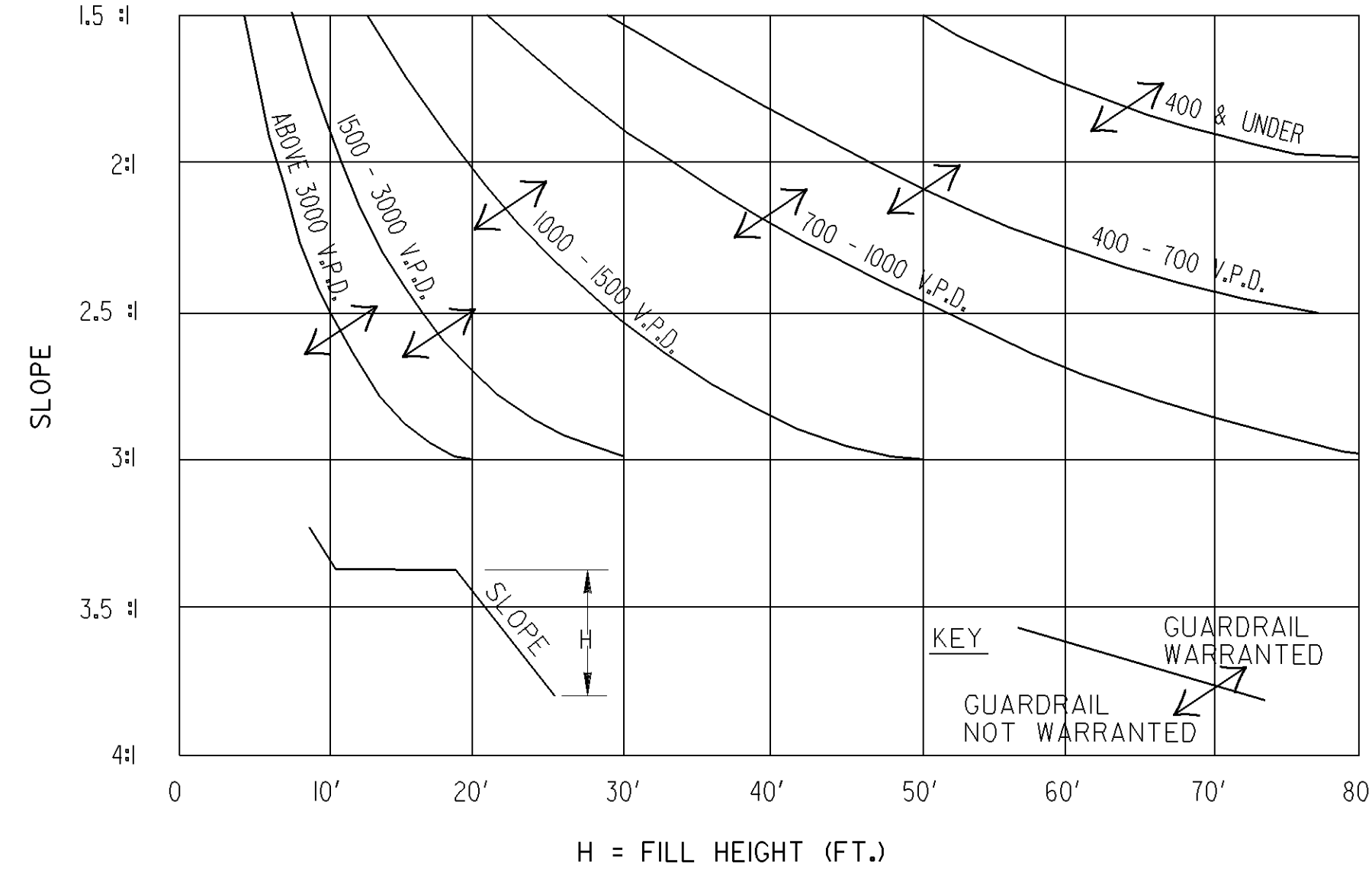
CZ_C = CLEAR ZONE ON OUTSIDE OF CURVATURE, FEET

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

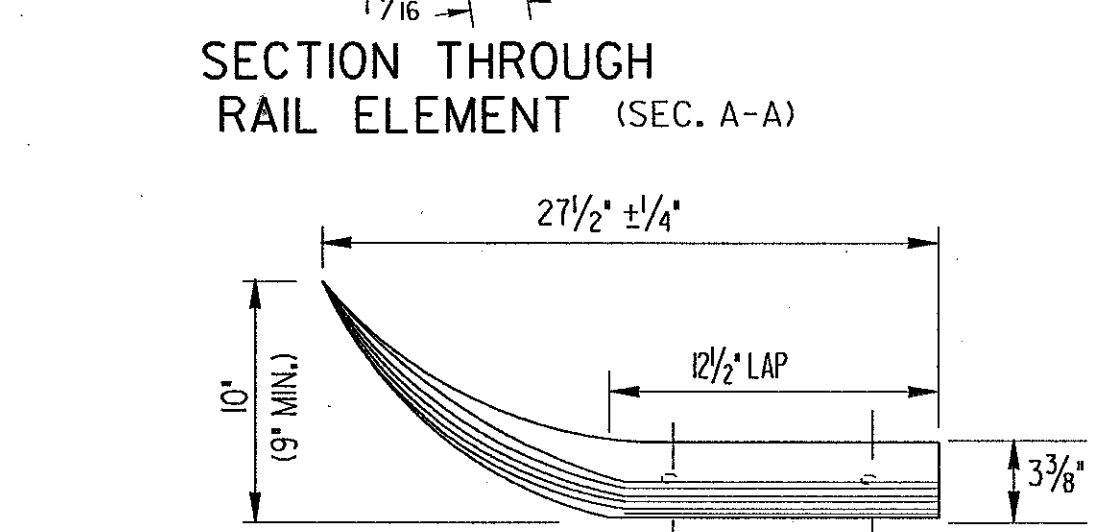
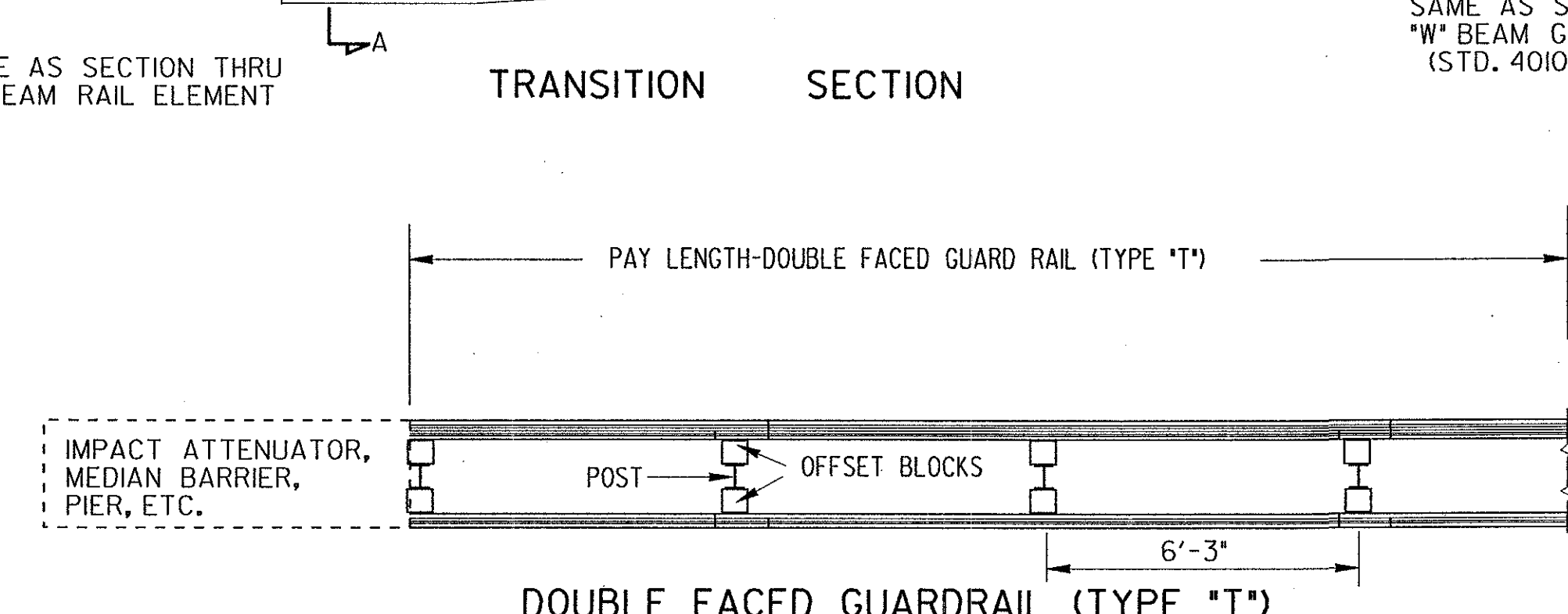
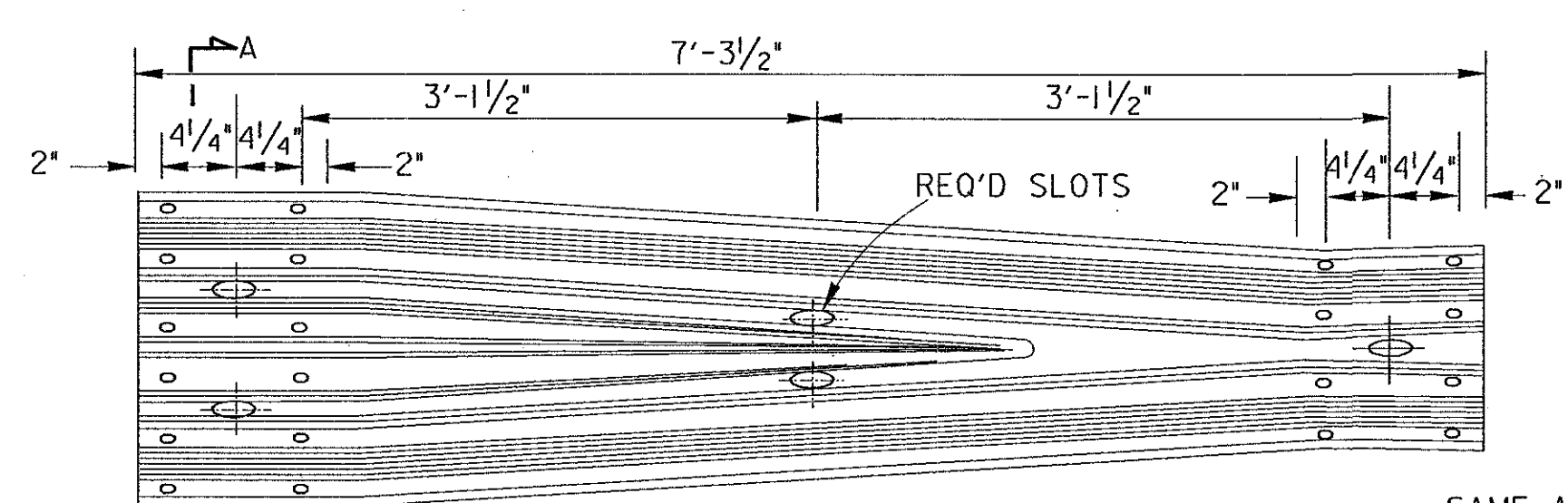
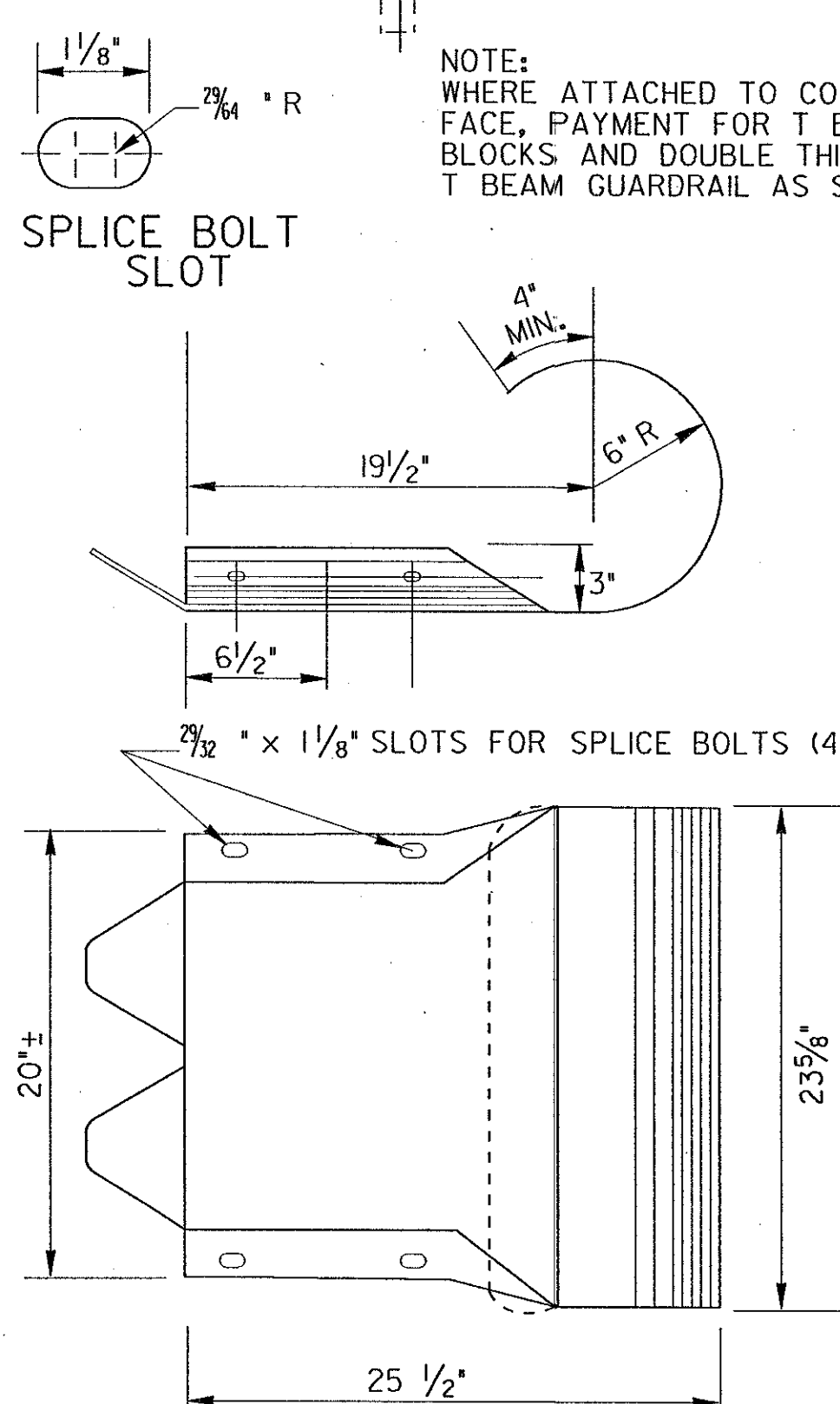
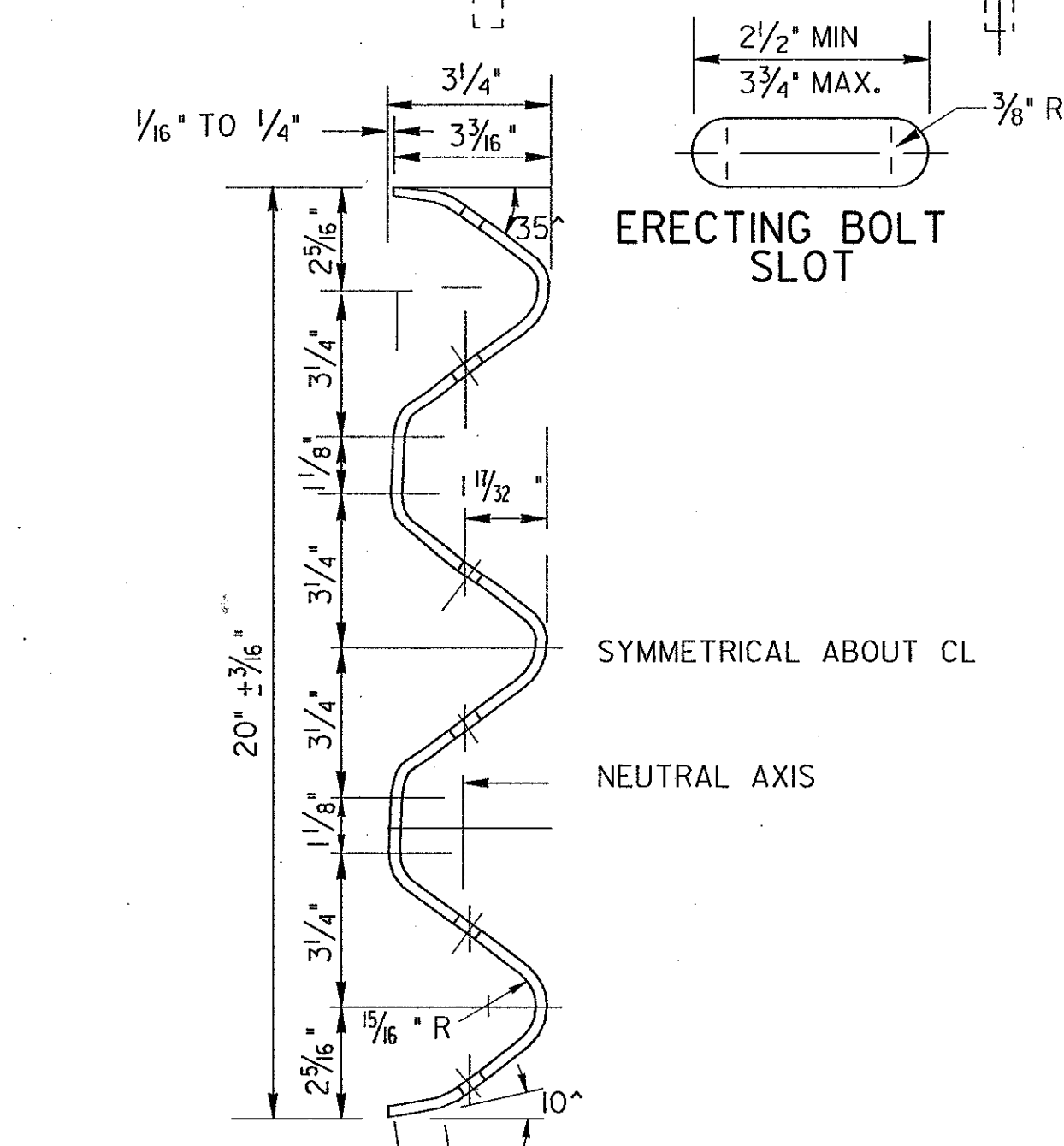
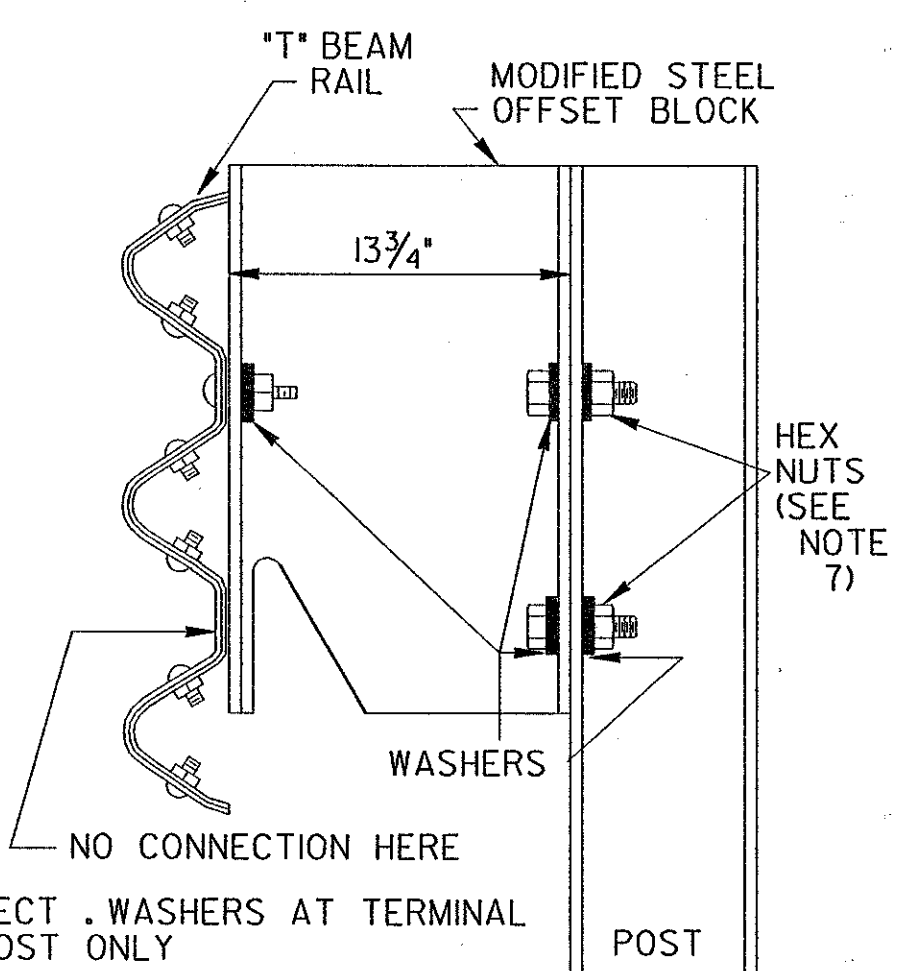
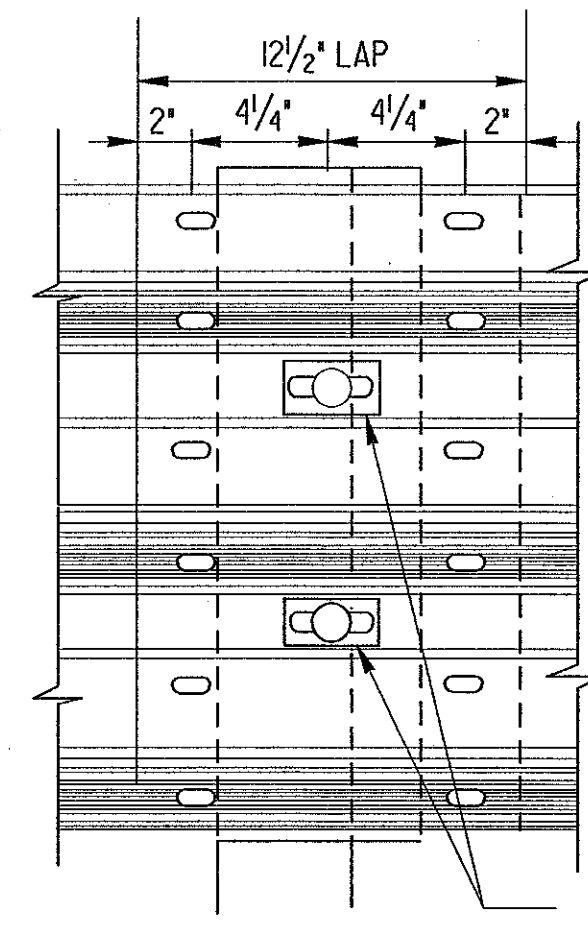
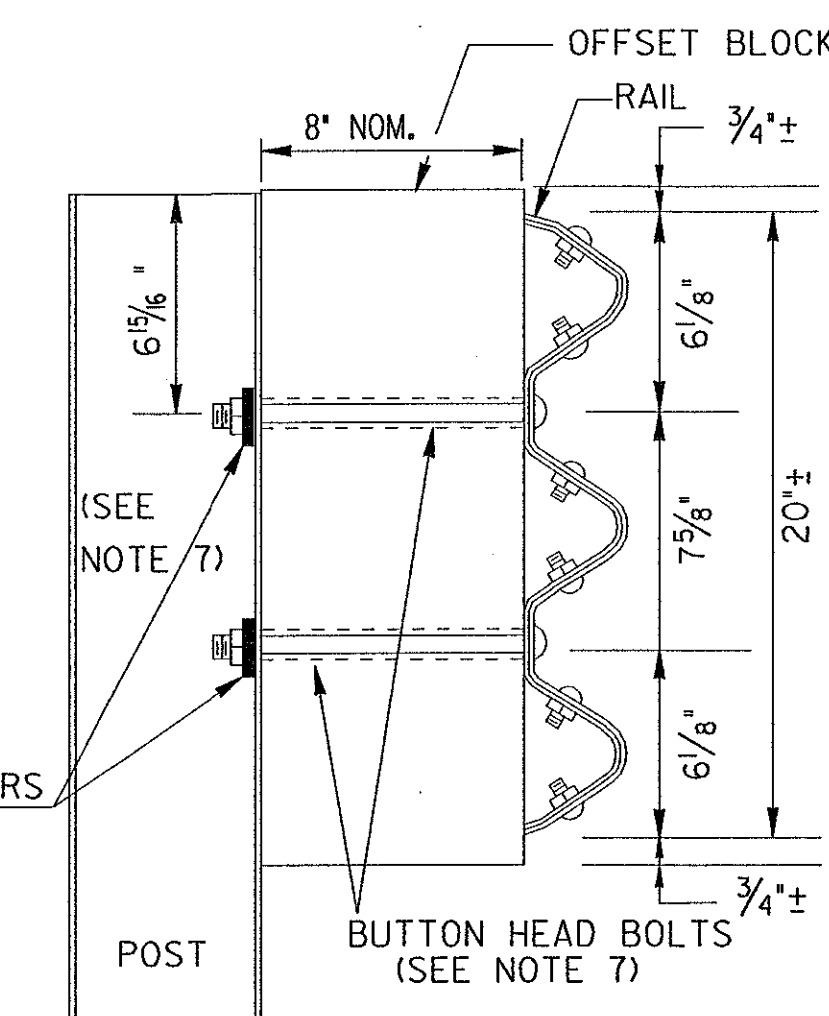
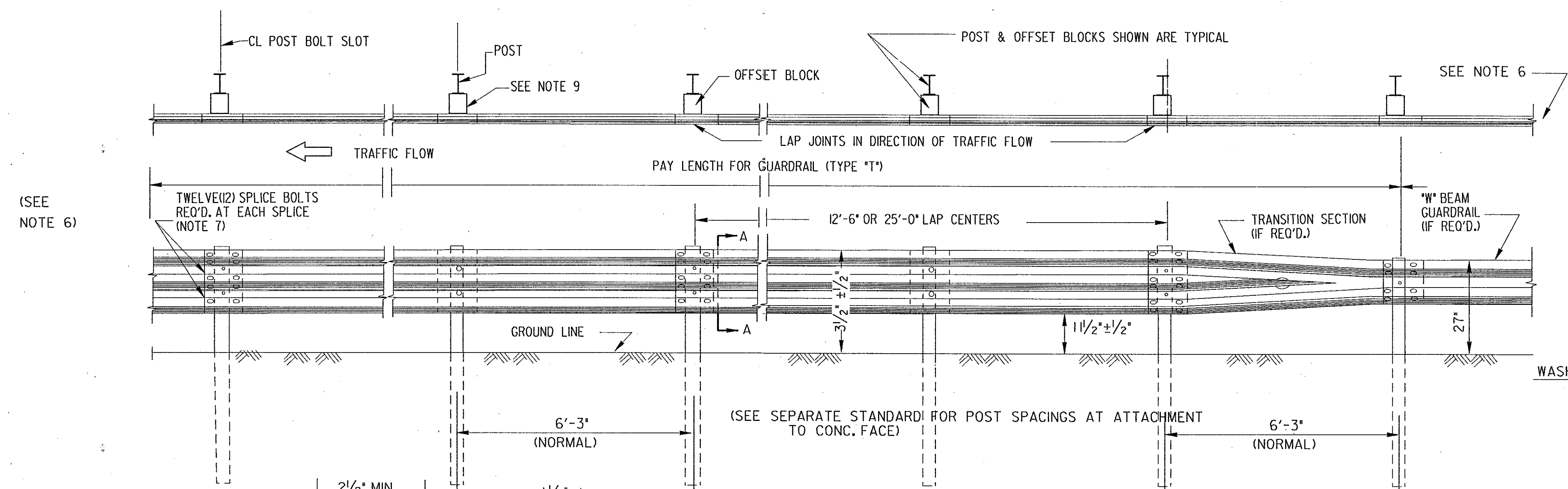
K_CZ = CURVE CORRECTION FACTOR

NOTE:
THE CURVE CORRECTION FACTOR IS APPLIED TO THE OUTSIDE OF CURVES ONLY. CURVES FLATTER THAN 2860 FEET DO NOT REQUIRE AN ADJUSTED CLEAR ZONE.

FILL HEIGHT / SLOPE WARRANTS

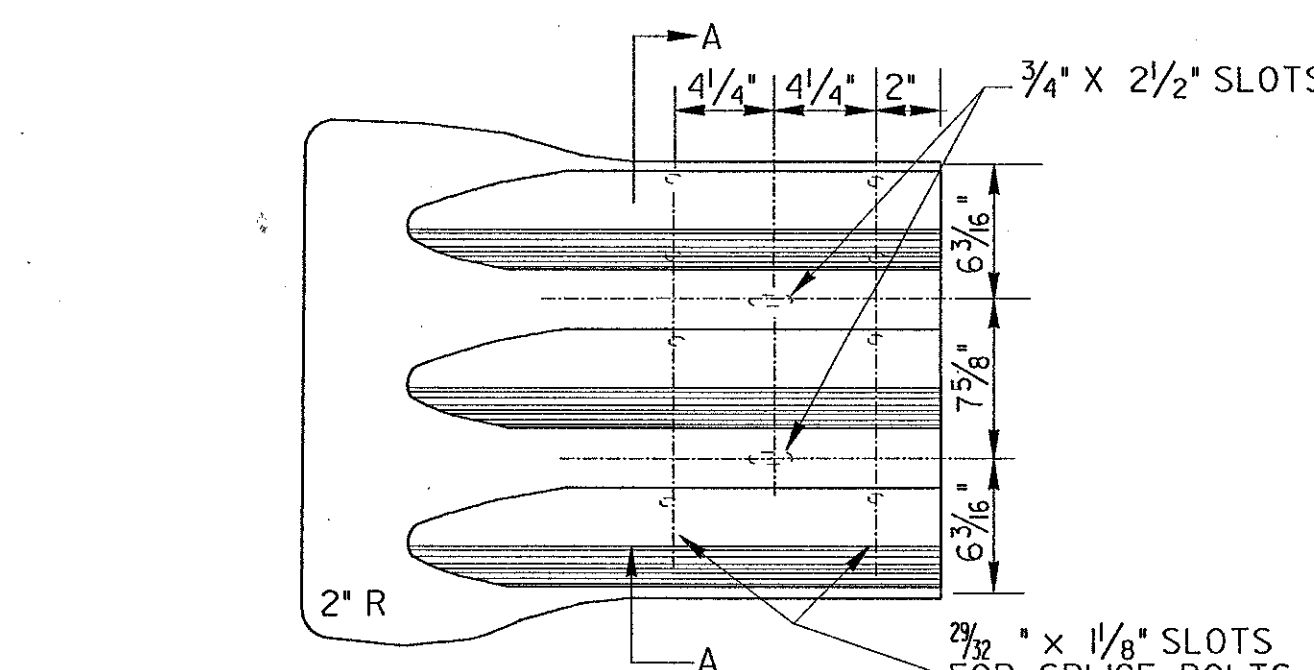


STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	WID 0208-1		

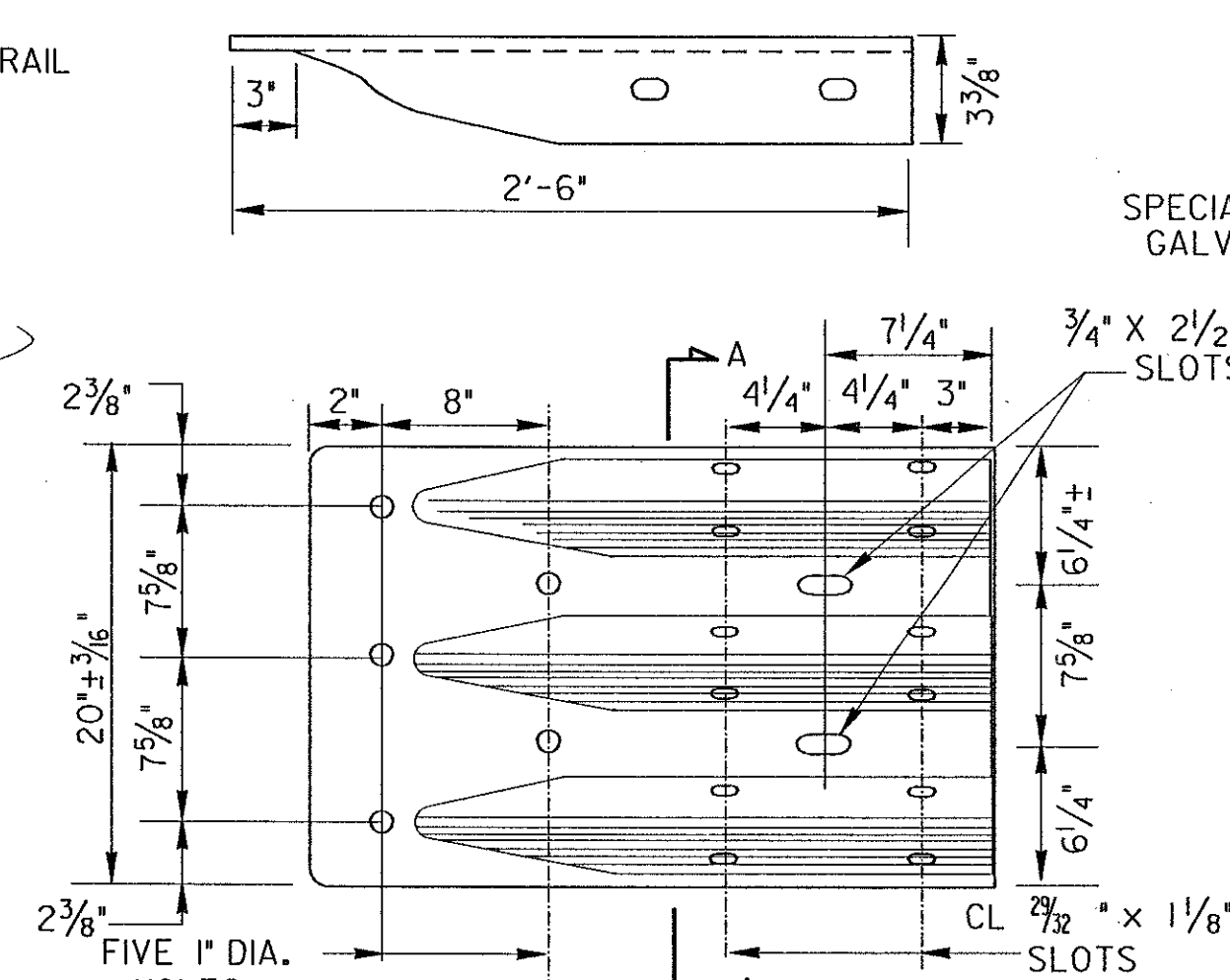
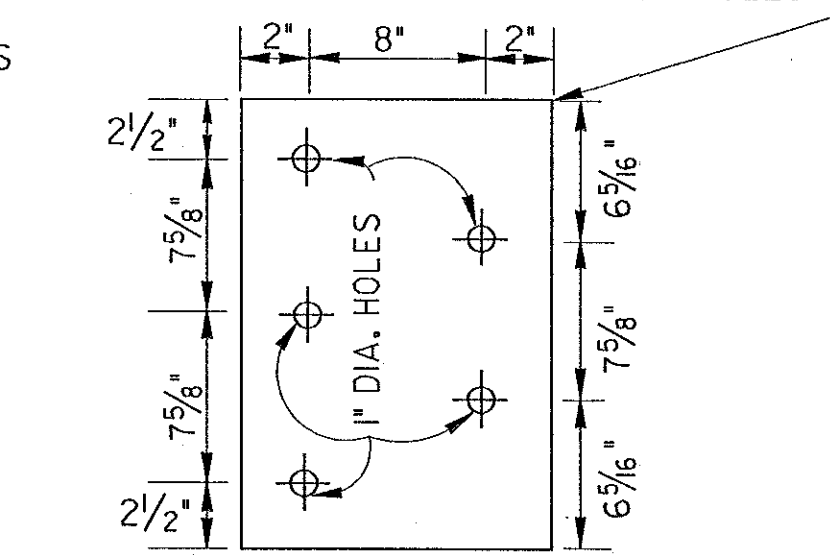


ROUNDED TERMINAL SECTION TO BE LAPPPED ON TRAFFIC FACE OF RAIL WHERE TYPE I ANCHORAGE IS REQUIRED

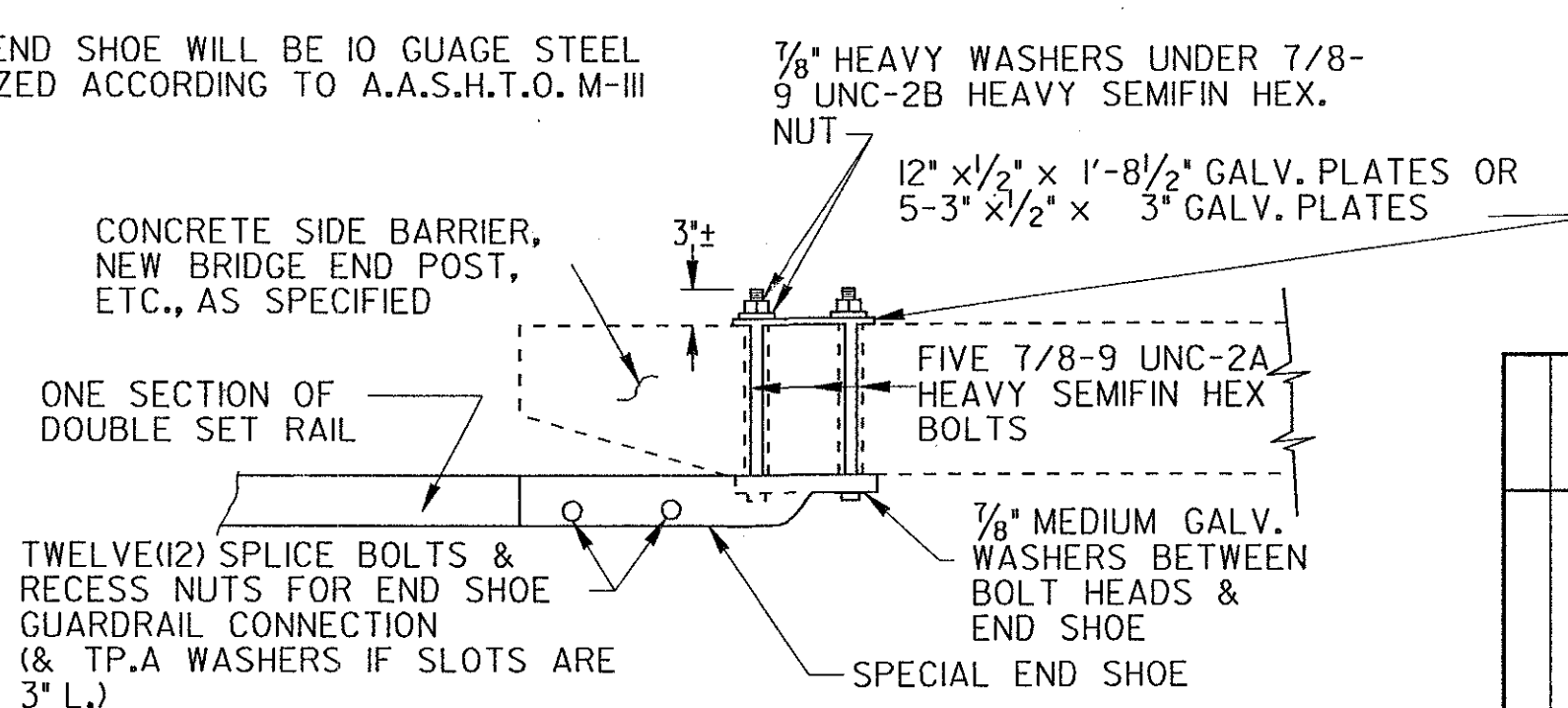
THE FLARED TERMINAL SECTION MAY BE USED AS AN ALTERNATE TO THE ROUND TERMINAL SECTION.



1/2" x 12" x 1'-8 1/4" (A.S.T.M. A-36) GALV. (A.S.T.M. A-153) AFTER HOLES



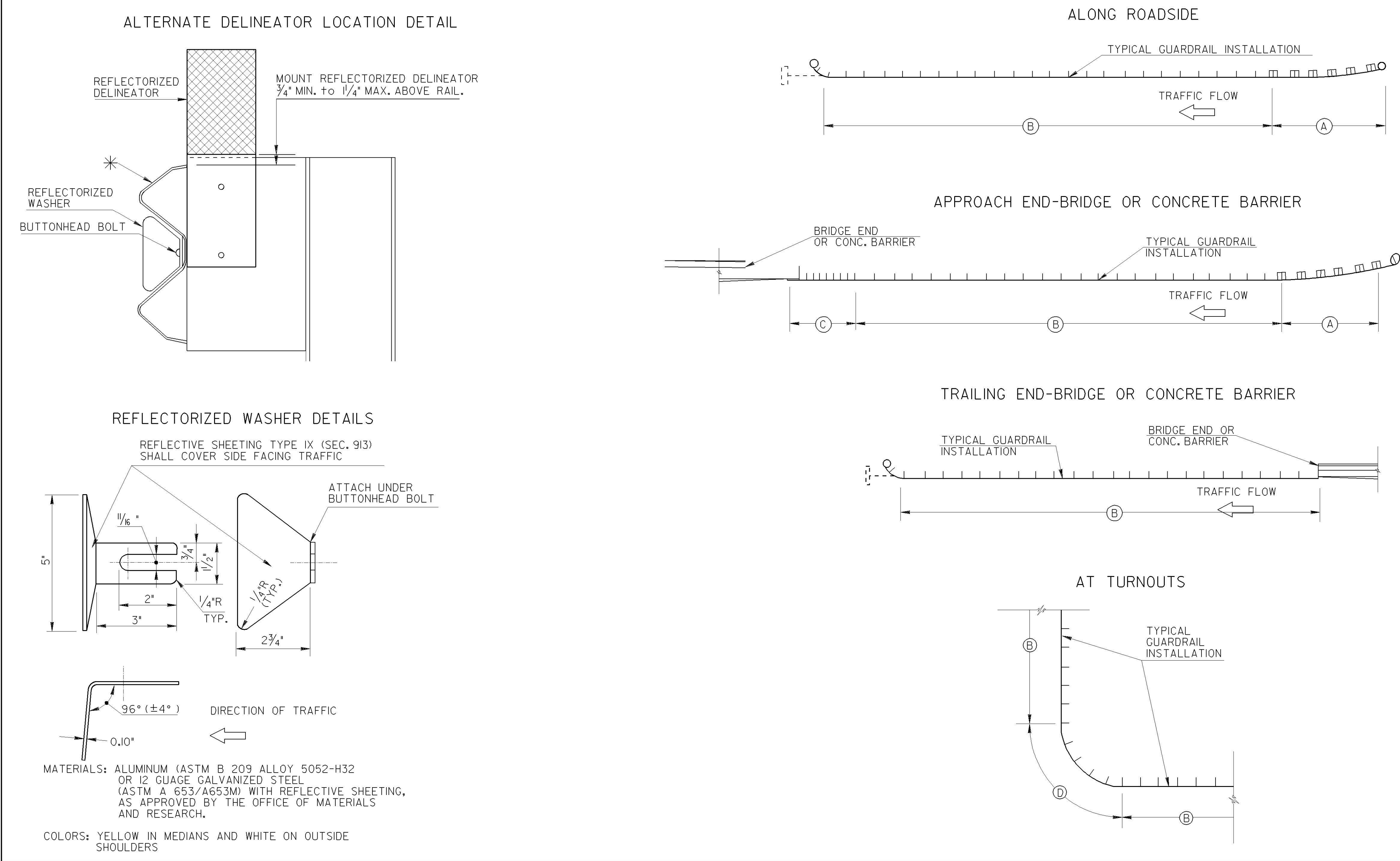
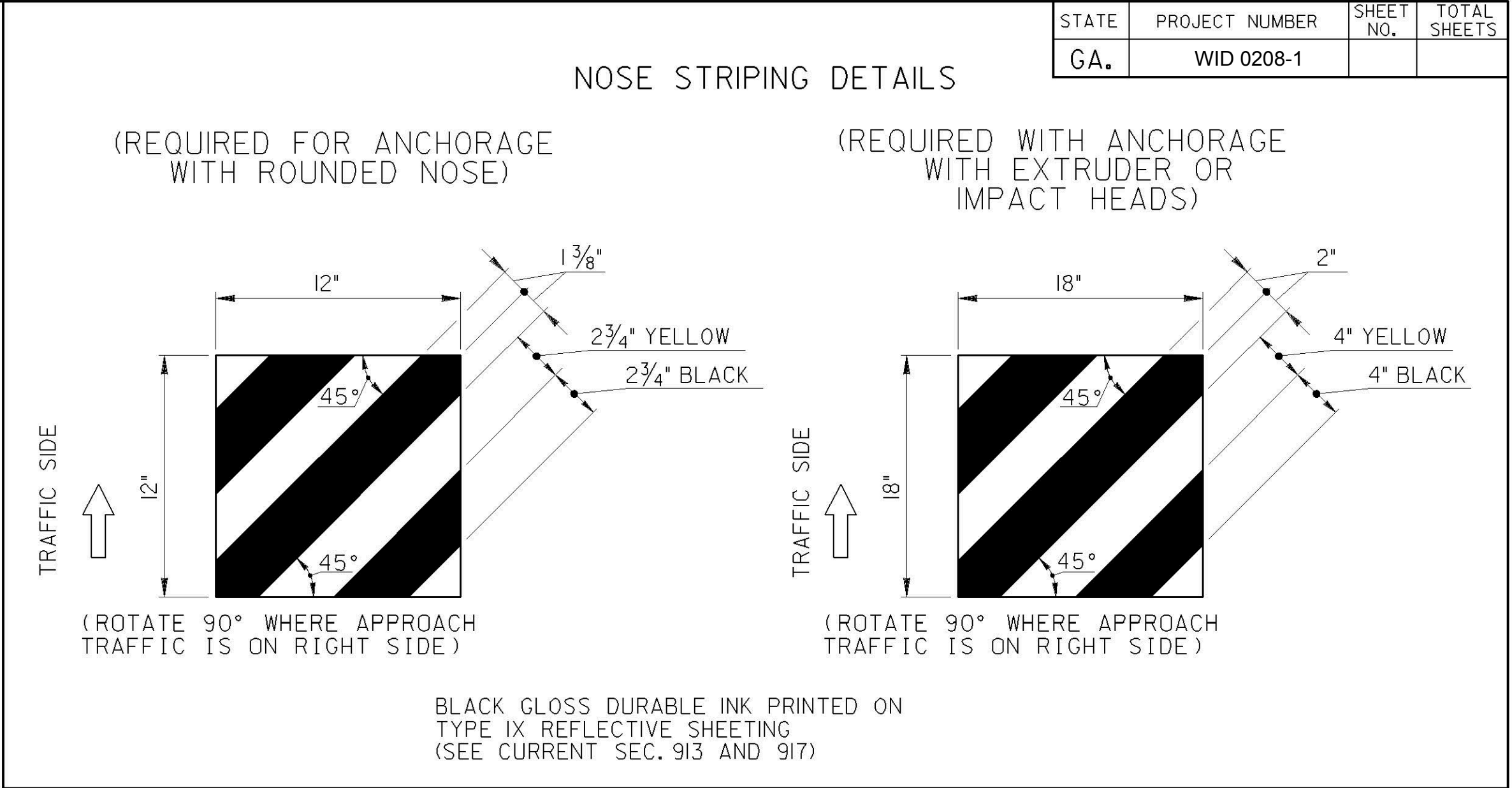
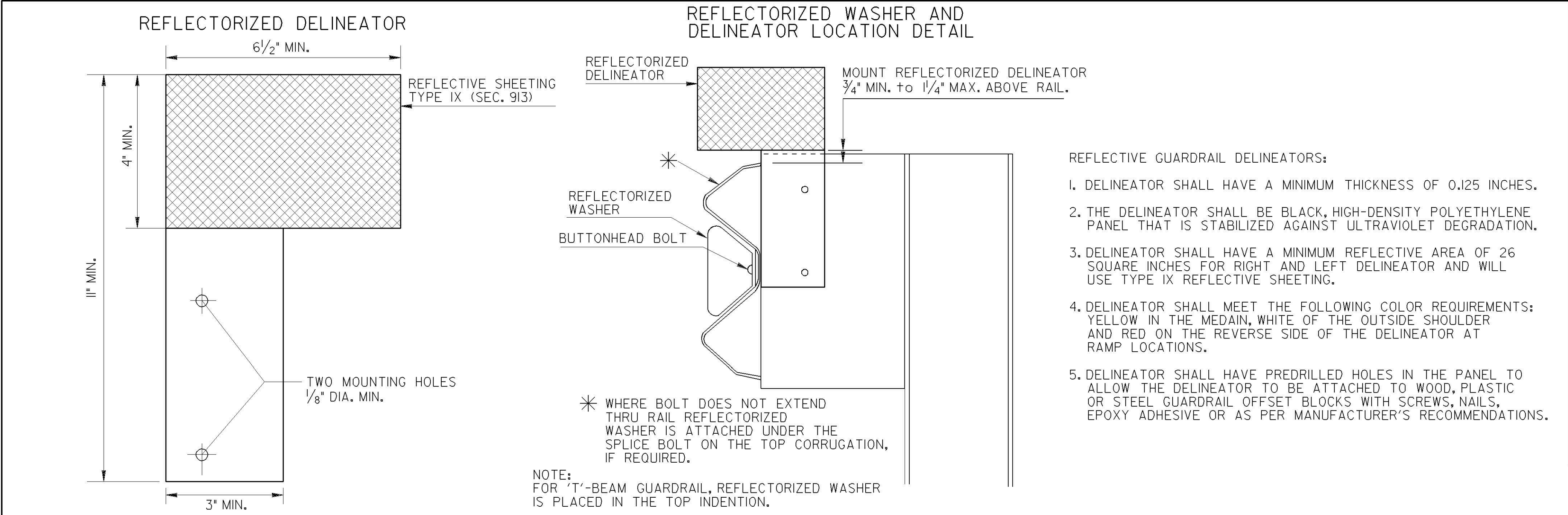
SPECIAL END SHOE WILL BE 10 GAUGE STEEL GALVANIZED ACCORDING TO A.A.S.H.T.O. M-III



NOTE: THE T-BEAM RAIL ELEMENT/END SHOE SPLICE SHALL BE LAPPPED IN THE DIRECTION OF THE NEAREST TRAFFIC.

- GENERAL NOTES:
- SPECIFICATIONS: GA. STANDARD CURRENT EDITION & SUPPLEMENTS THERETO
 - DIMENSIONS ARE SUBJECT TO MANUFACTURING TOLERANCES.
 - NET LENGTH OF RAIL ELEMENTS MAY BE EITHER 12'-6" OR 25'-0".
 - RAIL ELEMENTS ON CURVES OF RADI LESS THAN 150' WILL BE PERCURRED.
 - PAYMENT FOR GUARDRAIL (TYPE "T") WILL INCLUDE ALL POSTS, BLOCKS, HARDWARE ACCESSORIES AND WHERE REQUIRED ALL ADDITIONAL POSTS, END SHOES, TERMINAL SECTIONS, TRANSITION SECTIONS, BACK-UP PLATES AND REMOVAL AND REPLACEMENT OF PORTIONS OF MEDIAN PAVING, SPILLWAYS OR CATCH BASINS WHERE NECESSARY.
 - ALL GUARDRAIL TERMINALS SHALL REQUIRE AN APPROVED ANCHORAGE AS SPECIFIED IN THE PLANS OR APPROVED BY THE ENGINEER EXCEPT WHERE CONNECTED TO A BRIDGE END OR OTHER CONCRETE FACE.
 - NUTS, BOLTS AND WASHERS WHICH ARE NOT DETAILED ON THIS STANDARD, SHALL BE AS SHOWN FOR W-BEAM GUARDRAIL ON STANDARD 4010.
 - SEE SEPARATE STANDARDS AS APPLICABLE FOR ANCHORAGES, POSTS, OFFSET BLOCKS, CONNECTIONS TO CONCRETE FACE, W-BEAM GUARDRAIL, ETC.
 - SEE STANDARD 4011-A FOR DETAILS AND REQUIREMENTS OF BACK -UP PLATES, WHERE STEEL OFFSET BLOCKS ARE ALLOWED OR SPECIFIED.
 - OFFSET BLOCKS SHALL BE PLASTIC UNLESS OTHERWISE APPROVED OR SPECIFIED.

DATE		DEPARTMENT OF TRANSPORTATION	
		STATE OF GEORGIA	
REVISION		STANDARD	
		"T" BEAM GUARDRAIL	
		NO SCALE	
		REV. & REDR. NOV., 1999	
BY	DES. & REV.	(SUBMITTED) <i>James A. Kessul</i>	NUMBER 4270
	REDR. CHK.	(APPROVED) <i>Paul L. Eubank</i> CHIEF ENGINEER	



SPACING OF REFLECTORIZED WASHERS AND DELINEATORS

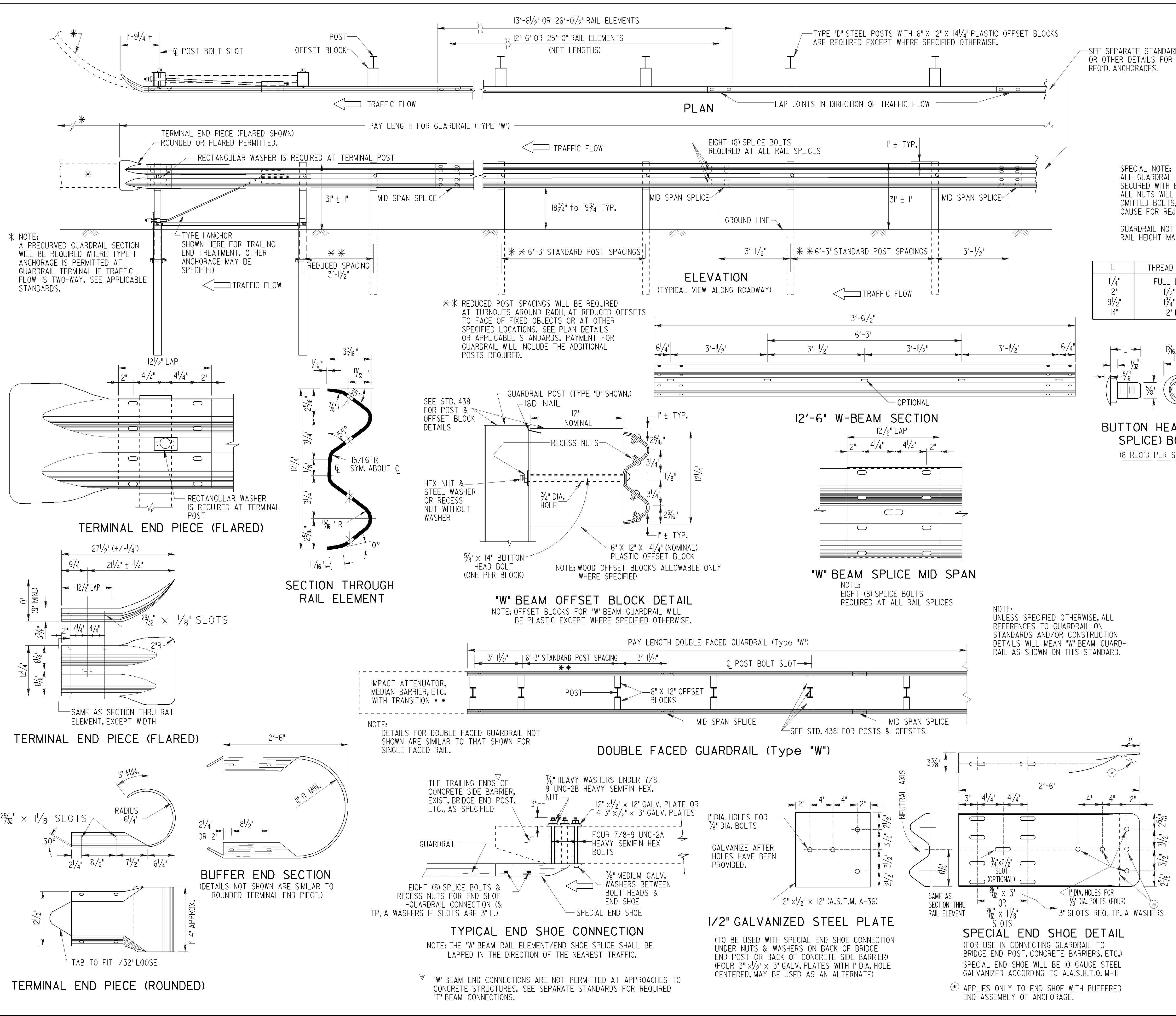
- (A) -AT ANCHORAGES:
- TWO (2) REFLECTORIZES WASHERS ARE REQUIRED ON THE RAIL
UNDER SPLICE BOLTS AS DIRECT BY THE ENGINEER FOR
ELLIPTICALLY FLARED ANCHORAGES WITH ROUNDED END PIECES.
- NO REFLECTORIZED WASHERS OR DELINEATOR WILL BE USED FOR
TANGENTIALLY ALIGNED OR STRAIGHT TAPERED ANCHORAGE WITH
EXTRUDER OR IMPACT HEADS;
- (B) -AT 75 FT. SPACINGS FOR INTERMEDIATE SECTIONS;
- (C) -THREE WASHERS AT 6'-3" SPACING AT CONNECTIONS
TO CONCRETE FACE ON THE APPROACH END;
- (D) -AT 12'-6" SPACINGS AROUND RADII TURNS.

NOTE: THE SPACING WILL BE USED TO INSTALL THE DELINEATOR ON
NEW GUARDRAIL, EXISTING GUARDRAIL WITH EXISTING GUARDRAIL
WASHERS AND EXISTING GUARDRAIL WITHOUT EXISTING GUARDRAIL
WASHERS.

GENERAL NOTES:

1. SPECIFICATIONS: GEORGIA STANDARD, CURRENT EDITION, & SUPPLEMENTS THERETO.
2. SEE SEPARATE STANDARDS FOR DETAILS OF GUARDRAIL INSTALLATIONS,
CONNECTING HARDWARE, AND ANCHORAGES.
3. PAYMENT FOR REFLECTORIZED WASHERS, DELINEATORS AND NOSE STRIPING WILL
BE INCLUDED IN THE PAVEMENT FOR GUARDRAIL AND ANCHORS IF INDIVIDUALS
PAY ITEMS ARE NOT SHOWN IN THE CONTRACT.
4. ADJUSTMENTS OF SPACINGS AND/OR REQUIREMENTS FOR REFLECTIVE WASHERS
AND DELINEATORS MAY BE DIRECTED BY THE ENGINEER TO SUIT INDIVIDUAL
LOCATIONS.
5. WHERE DOUBLE FACED GUARDRAIL IS LOCATED ON THE INSIDE SHOULDER OF
MEDIANS, REFLECTORIZED WASHERS AND DELINEATORS SHALL BE REQUIRED ONLY
ON THE SIDE WHICH IS NEAREST TO TRAFFIC, UNLESS SPECIFIED OTHERWISE.
6. WHEN DOUBLE FACED GUARDRAIL IS LOCATED IN THE CENTER OF THE MEDIAN,
REFLECTORIZED WASHER AND DELINEATORS SHALL BE REQUIRED ON BOTH SIDES.

10-22-14				4-10-06				2-1-01				6-1-99				DATE				DEPARTMENT OF TRANSPORTATION				STATE OF GEORGIA			
ADDED C-RAIL DELINEATOR AND REVISED GEN. NOTE.				REV. REFLECTIVE SH. TYPE.				REFLEC. SH. SPEC.				ADD NOSE STRIPING				REVISION				NO SCALE				REV. & REDR. APRIL, 1999			
B.U.O.				G.L.O.				R.M.U.				BY				DES. _____				(SUBMITTED) <i>B. A. Stettin</i>				NUMBER			
																DRWN. _____				(APPROVED) <i>Russell R. McNeely</i>				4360			
																CHK. _____				CHIEF ENGINEER							



STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	WID 0208-1		

TYPE A WASHER (GALV.)
IF SLOTS IN SPECIAL END SHOE ARE 3' LONG, TP. A WASHERS ARE REQ'D UNDER SPLICE BOLT HEADS & UNDER NUTS WITH 2' LONG SPLICE BOLTS. IF END SHOE SLOTS ARE 1/8" LONG, USE NORMAL SPLICE CONNECTIONS

STEEL WASHER (GALV.)
(REQ'D. UNDER 5/8" HEX NUTS AND AS SPECIFIED)

L	THREAD LENGTH
1/4"	FULL LENGTH
2"	1/2" MIN.
9/2"	1 3/4" MIN.
14"	2" MIN.

POST BOLT SLOT SPLICE BOLT SLOT

POST BOLT SLOT

SPLICE BOLT SLOT

RECESS NUT

RECTANGULAR WASHER (GALV.)
(FOR USE AT TERMINAL POST OR WHERE SPECIFIED)

GENERAL NOTES:

- SPECIFICATIONS: GEORGIA STANDARD CURRENT EDITION, AND SUPPLEMENTS THERETO.
- NUTS, BOLTS, WASHERS, RAIL, TERMINAL SECTIONS, END SHOES, BACK-UP PLATES, END SECTIONS AND OTHER GUARDRAIL HARDWARE ARE IN ACCORDANCE WITH THE CURRENT ARTBA TECHNICAL BULLETIN NO. 268 ... UNLESS SPECIFIED OTHERWISE, DIMENSIONS FOR POSTS AND OFFSET BLOCKS WILL BE ACCORDING TO GA. STANDARD 4381.
- FOR DETAILS OF GUARDRAIL ANCHORAGES, SEE APPLICABLE STANDARDS AND/OR CONSTRUCTION DETAILS.
- FOR LOCATION OF GUARDRAIL SEE APPLICABLE LOCATION STANDARDS.
- ALL STEEL HARDWARE COMPONENTS WILL BE GALVANIZED AFTER FABRICATION. GALVANIZING REPAIR COMPOUND (SEC. 645) WILL BE FIELD APPLIED TO ANY COATINGS DAMAGED.
- WHEN GUARDRAIL IS REQUIRED ON CURVES WITH RADII LESS THAN 150', PRECURVED RAIL WILL BE REQUIRED.
- PAYMENT FOR GUARDRAIL (Type "W") TO INCLUDE OFFSET BLOCKS, POST, BACK-UP PLATES WHERE REQUIRED, BOLTS, NUTS, WASHERS, TERMINAL SECTIONS, ADDITIONAL POST WHERE REQUIRED, & REMOVAL AND REPLACEMENT OF PORTIONS OF MEDIAN PAVING, SPILLWAYS, OR CATCH BASINS WHERE NECESSARY.
- ALL DIMENSIONS ARE SUBJECT TO MANUFACTURING TOLERANCES.
- STANDARD NET LENGTH OF RAIL ELEMENTS MAY BE EITHER 12'-6" OR 25'-0", THESE LENGTHS SHALL BE ARRANGED TO PROVIDE AS NEARLY AS POSSIBLE THE REQUIRED LENGTH FOR EACH INSTALLATION.
- WHEN REPLACING EXISTING 27" HEIGHT RUNS OF GUARDRAIL WITH 31" HEIGHT RAIL THE EXISTING OFFSET DISTANCE FROM THE GUARDRAIL POST TO THE EDGE OF PAVEMENT MAY REMAIN THE SAME.

DATE	REVISION	BY	DESCRIPTION

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

STANDARD
"W" BEAM GUARDRAIL
31 INCH GUARDRAIL HEIGHT

NO SCALE

AUGUST 2011

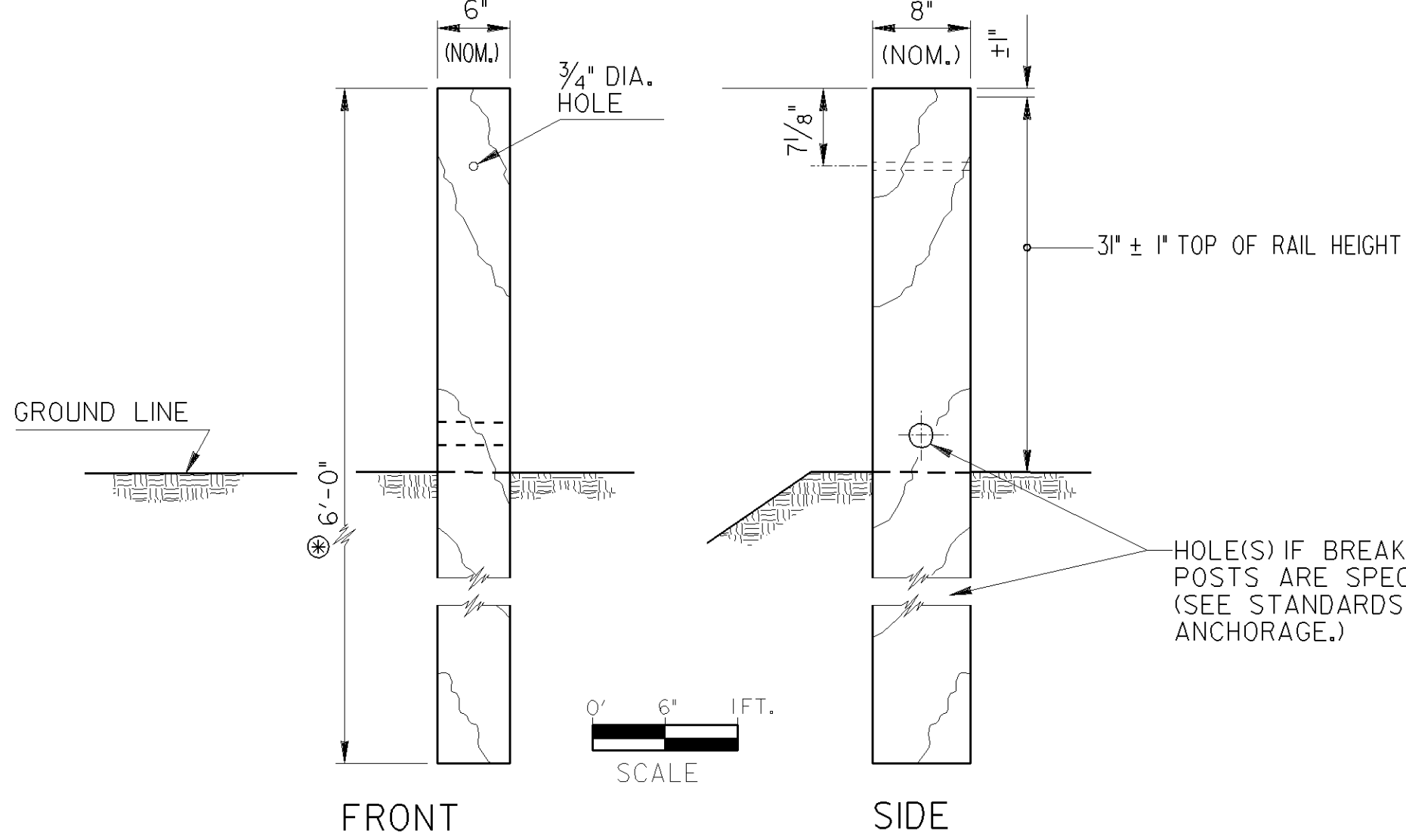
DES.	CHK.	REVIEW	DATE
G.L.O. (SUBMITTED)	G.L.O.	G.L.O.	
G.L.O.	B.R.E. (APPROVED)	B.R.E.	
G.L.O.	B.R.E.	B.R.E.	

NUMBER
4380

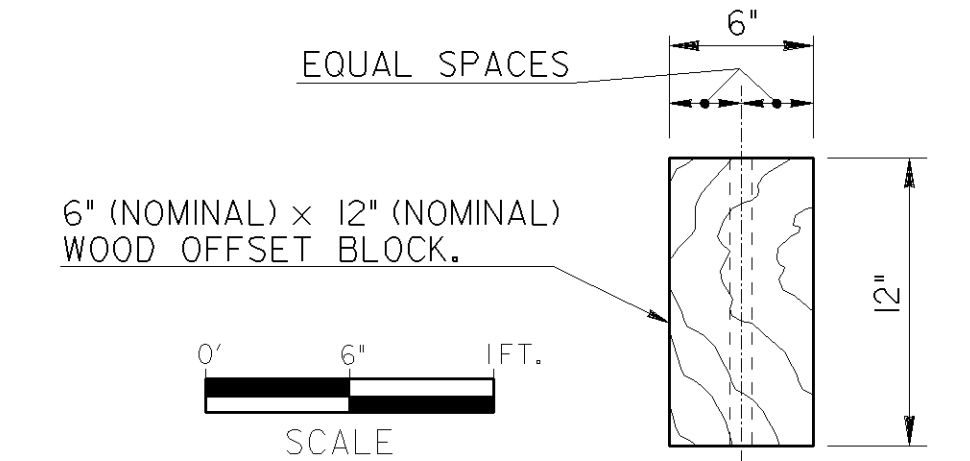
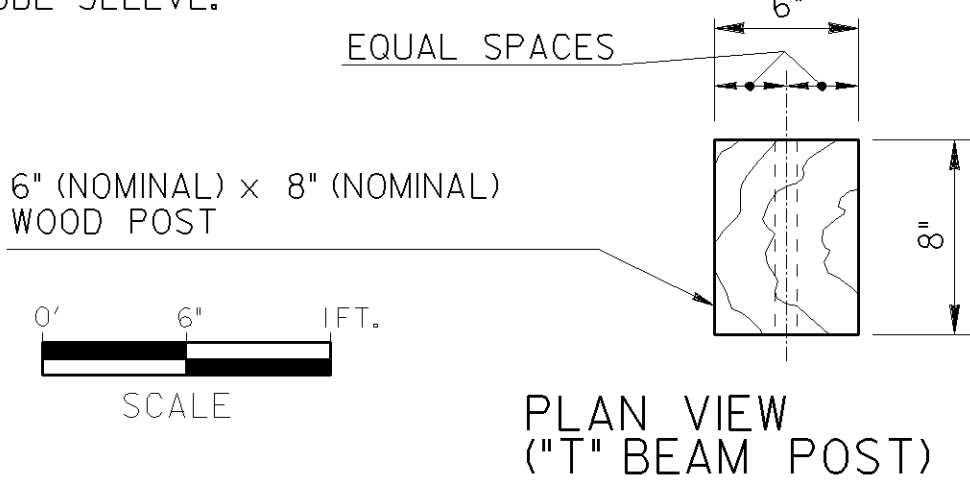
STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	WID 0208-1		

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

NOTE: WOOD POST ARE ALLOWABLE ONLY WHERE SPECIFIED.



SEE SEPARATE STANDARD OR DETAIL FOR POSTS IN TUBE SLEEVE.



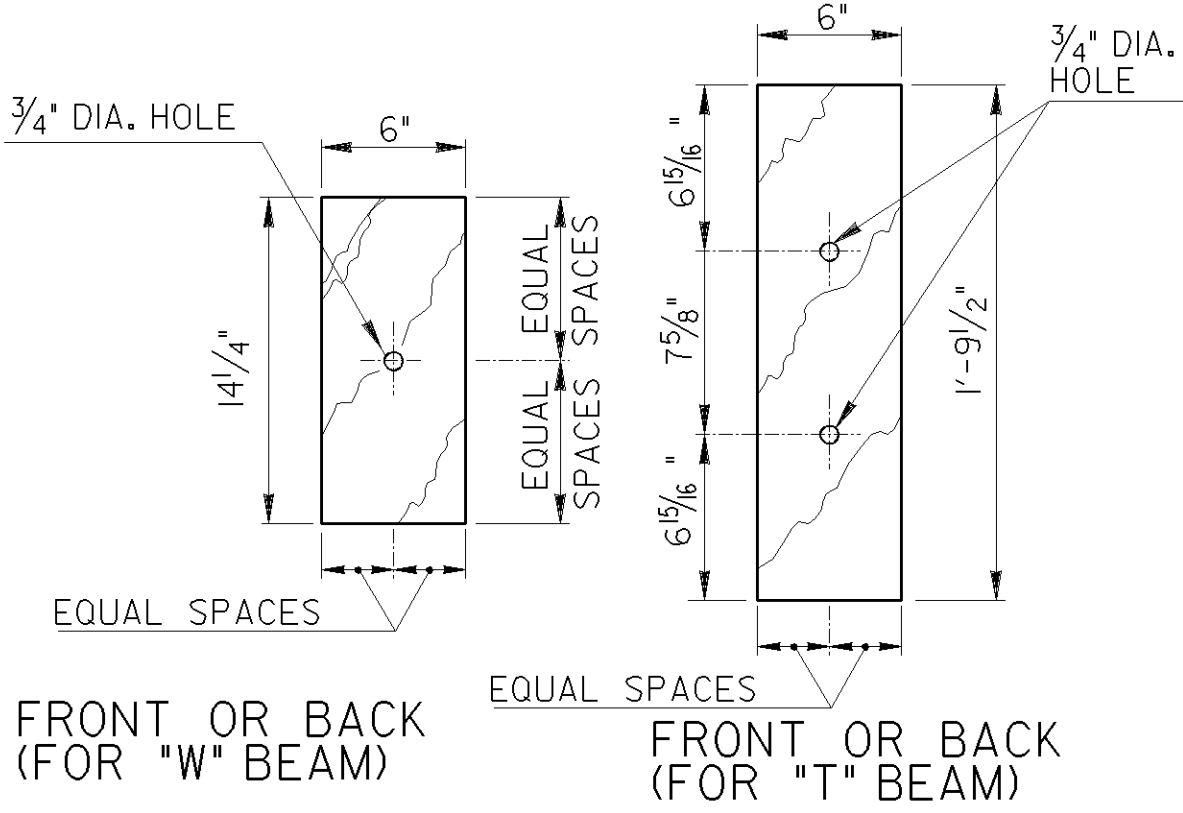
PLAN VIEW (FOR "W" BEAM OFFSET BLOCK)

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.

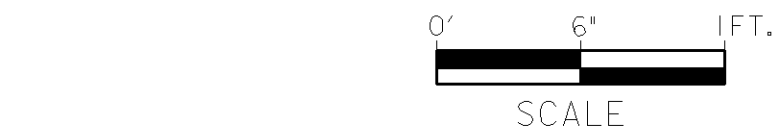
NOTE: WHERE WOOD OFFSET BLOCK ON STEEL POST IS PERMITTED IN "W" BEAM INSTALLATION, A NAIL OR SCREW FROM POST TO WOOD IS REQUIRED TO PREVENT ROTATION OF THE BLOCK.

WOOD OFFSET BLOCKS (WHERE PERMITTED, SEE NOTE 5(d))



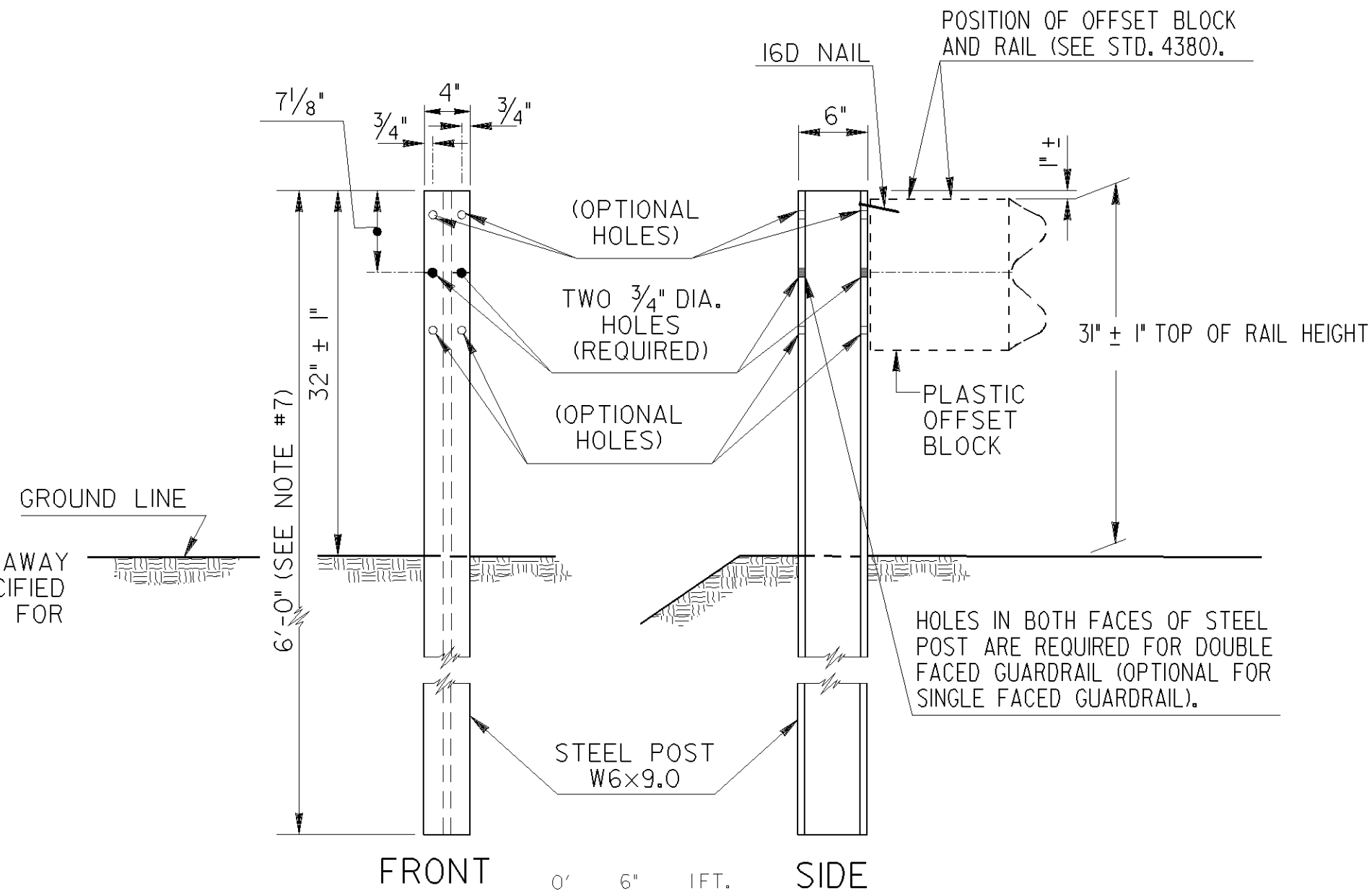
FRONT OR BACK (FOR "W" BEAM)

FRONT OR BACK (FOR "T" BEAM)



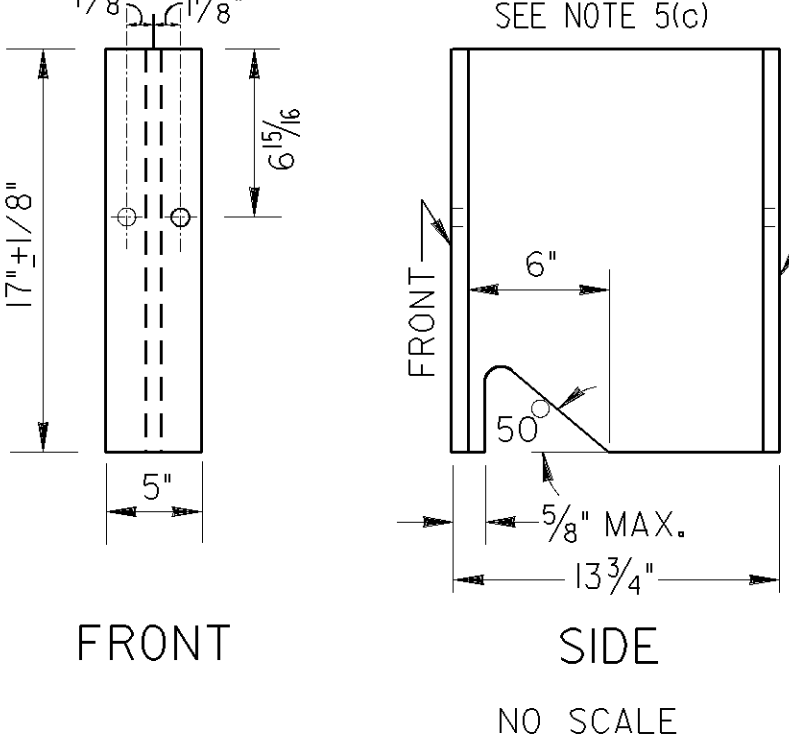
(PLAN VIEW IS SAME AS SHOWN FOR WOOD POST ABOVE)

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

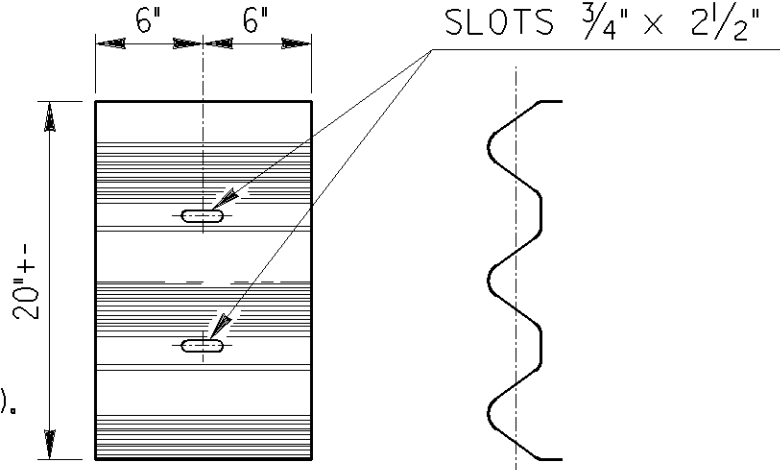


MODIFIED STEEL OFFSET BLOCK FOR "T" BEAM GUARDRAIL

NOTE: MODIFIED STEEL OFFSET BLOCKS ARE USED ONLY WHERE SPECIFIED SEE NOTE 5(c)



BACK-UP PLATE (FOR "T" BEAM GUARDRAIL)

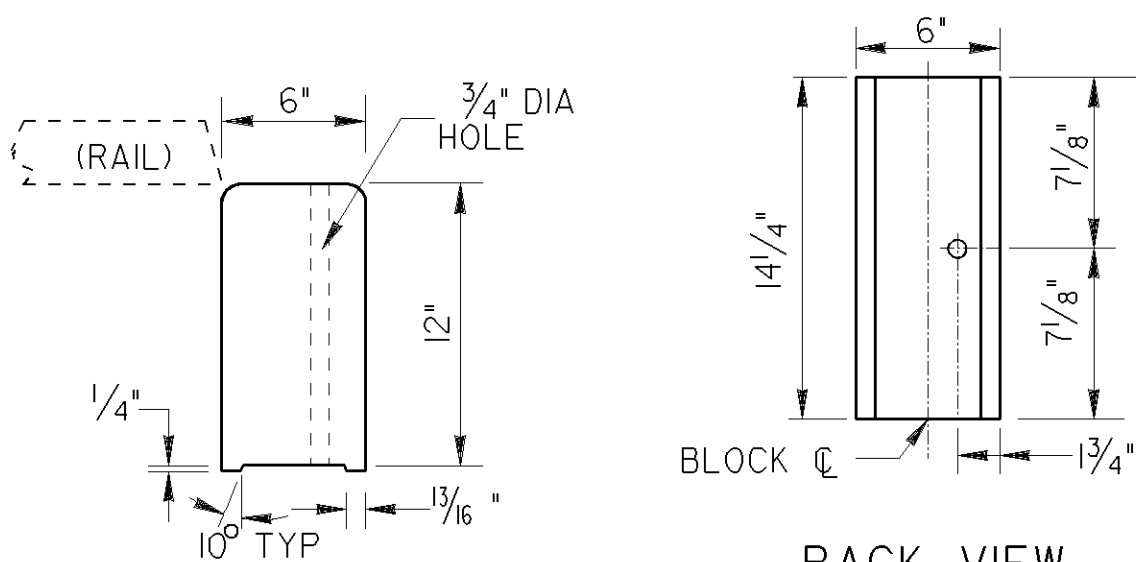


FRONT

SAME AS SECTION THROUGH RAIL (STANDARD 4270)

STANDARD PLASTIC OFFSET BLOCKS

NOTE: PLASTIC OFFSET BLOCKS SHALL BE OF TYPE LISTED IN GA.DOT OPL OF APPROVED PRODUCTS OR PER STANDARD SPECIFICATIONS.



PLAN

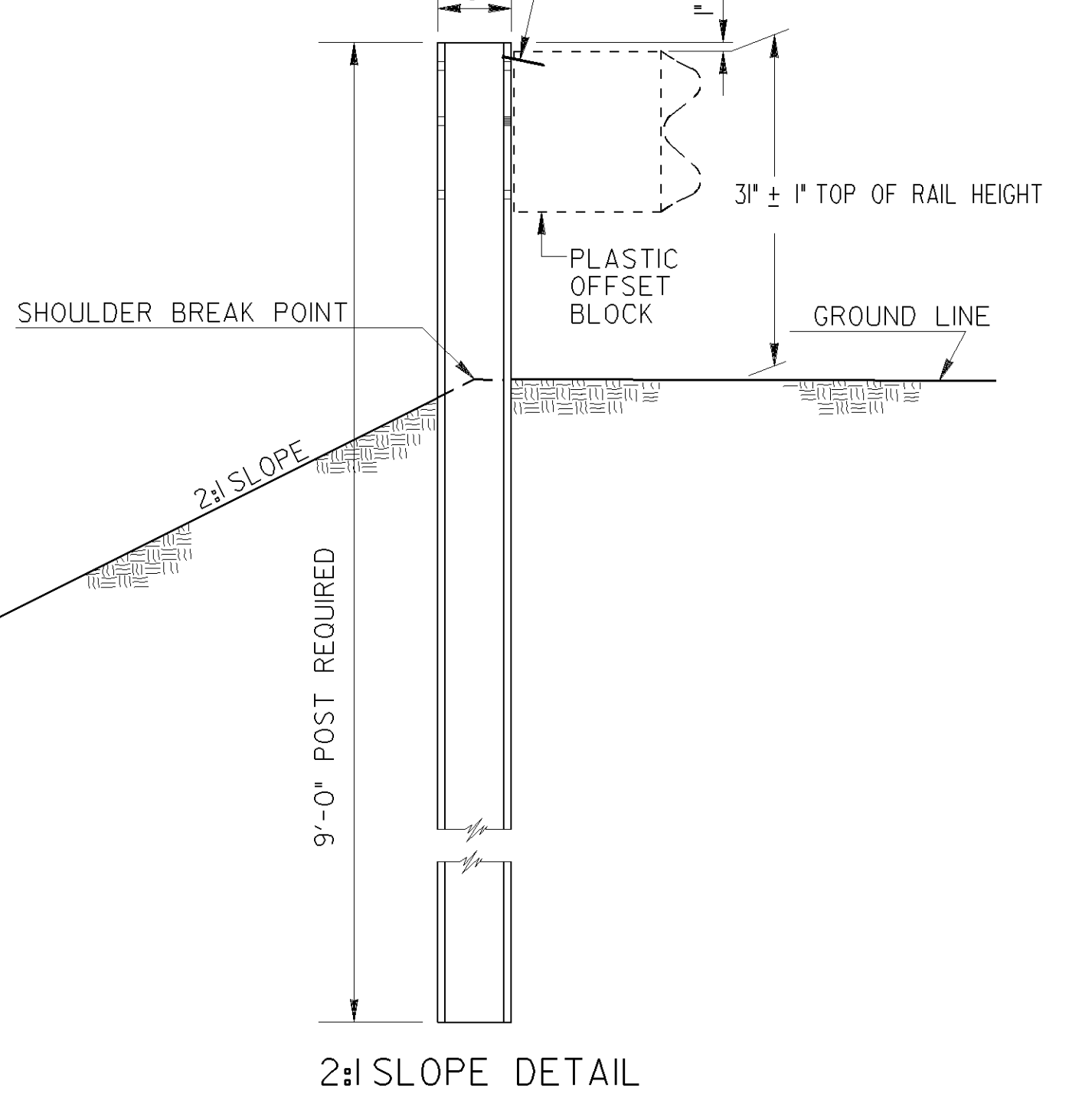
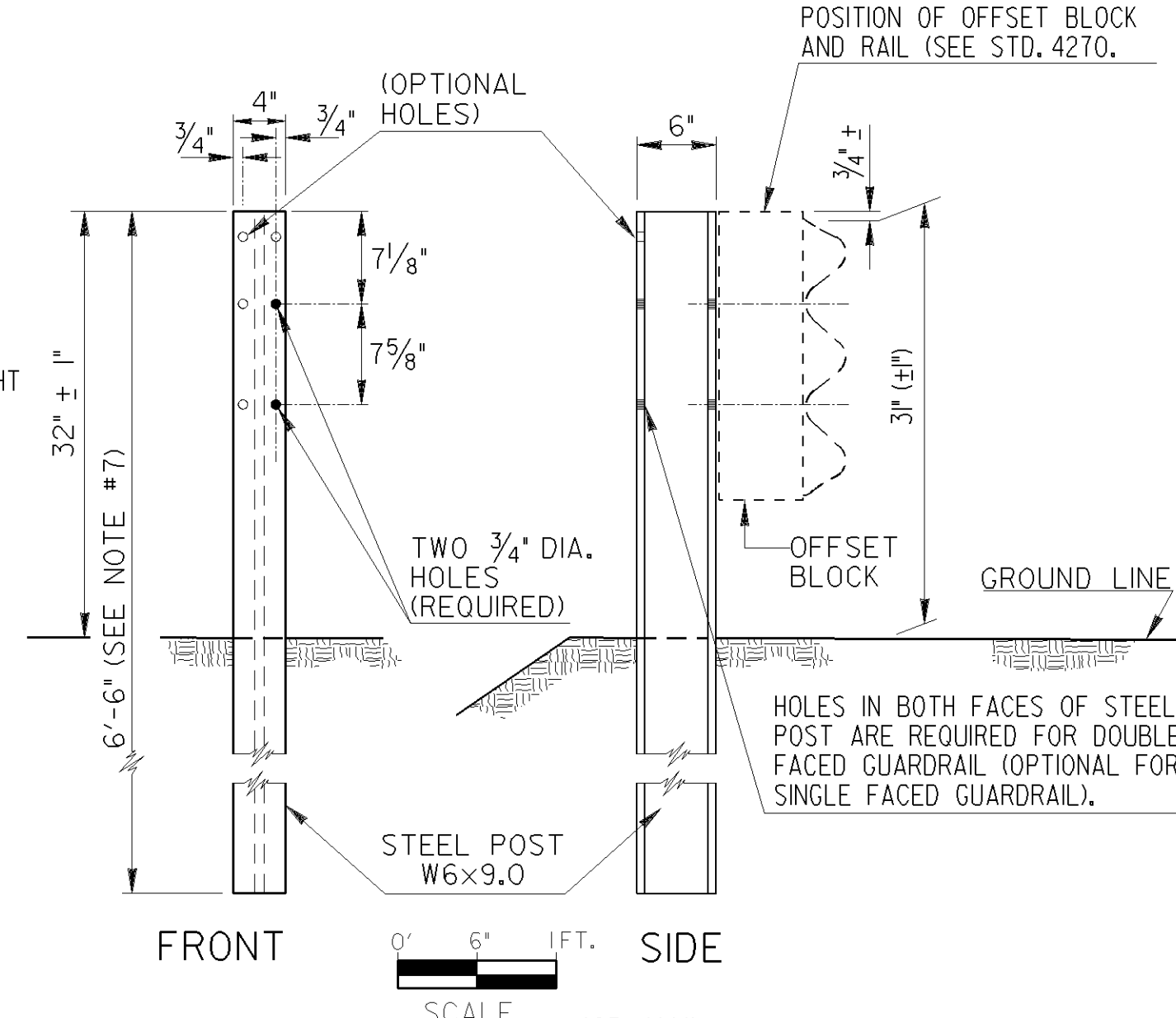
NOTE: DIMENSIONS ARE SUBJECT TO MANUFACTURER'S TOLERANCES.

BACK VIEW (FOR "W" BEAM)

NO SCALE

BACK VIEW (FOR "T" BEAM)

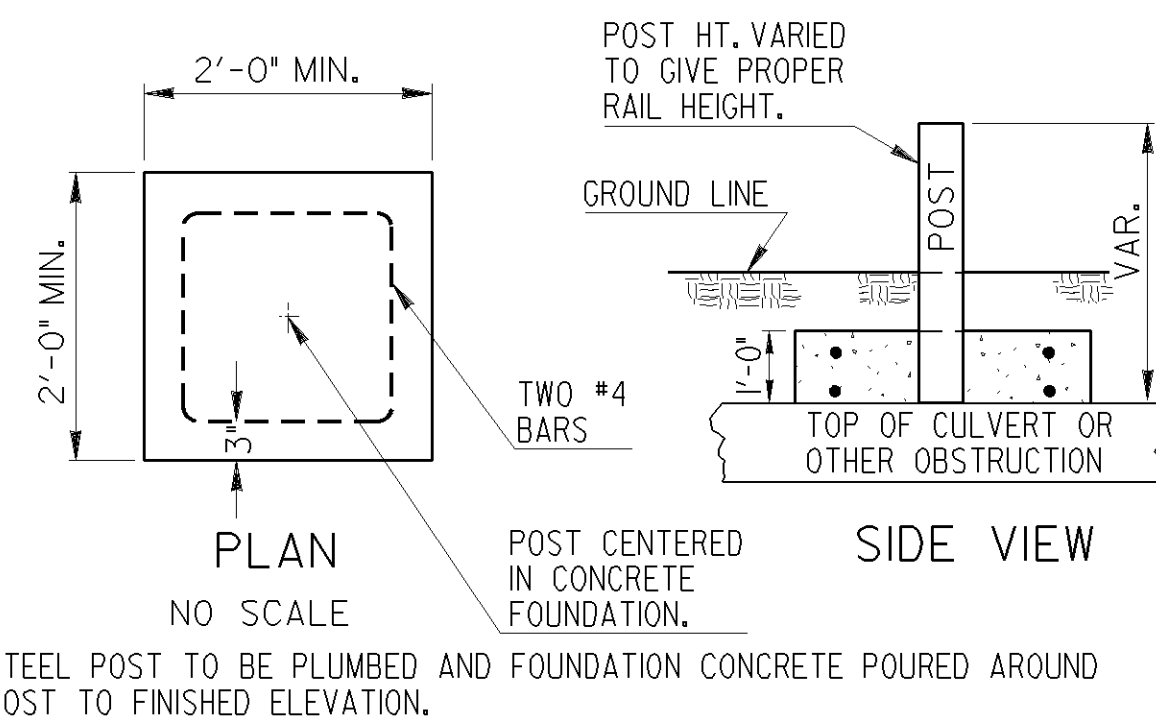
TYPE D-T STEEL POST (FOR "T" BEAM GUARDRAIL)



2:1 SLOPE DETAIL

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).



STEEL POST TO BE PLUMBED AND FOUNDATION CONCRETE POURED AROUND POST TO FINISHED ELEVATION.

PAYMENT FOR GUARDRAIL TO INCLUDE ALL EXTRA WORK AND MATERIALS INCLUDING CONCRETE (CL. A OR CL. B) AND NO. 4 BARS.

IF OFFSET FROM RAIL FACE TO HEADWALL IS LESS THAN 4'-3", POST SPACINGS ARE REDUCED TO 3'-1 1/2" C.C. ACROSS THE CULVERT WITH 7 SUCH SPACINGS IN ADVANCE AT NO ADDITIONAL PAYMENT.

GENERAL NOTES:

- SPECIFICATIONS GEORGIA STANDARD, CURRENT EDITION AND SUPPLEMENTS THERETO.
- 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.
- WHERE WOOD POST OR WOOD OFFSET BLOCKS ARE PERMITTED, THE WOOD SHALL BE TREATED IN ACCORDANCE WITH GEORGIA STANDARD SPECIFICATIONS.
- 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.
- (d) "W" BEAM GUARDRAIL: ALL OFFSET BLOCKS SHALL BE 12" 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.
- POSTS WILL BE SPACED AT 6'-3" C. TO C., UNLESS OTHERWISE NOTED.
- 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.
- 9'-0" POST REQUIRED IF GUARDRAIL INSTALLED ON A 2:1 SLOPE.

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.

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

STANDARD
POSTS AND OFFSET BLOCKS
FOR "W" & "T" BEAM GUARDRAIL
31 INCH GUARDRAIL HEIGHT

SCALE: AS SHOWN

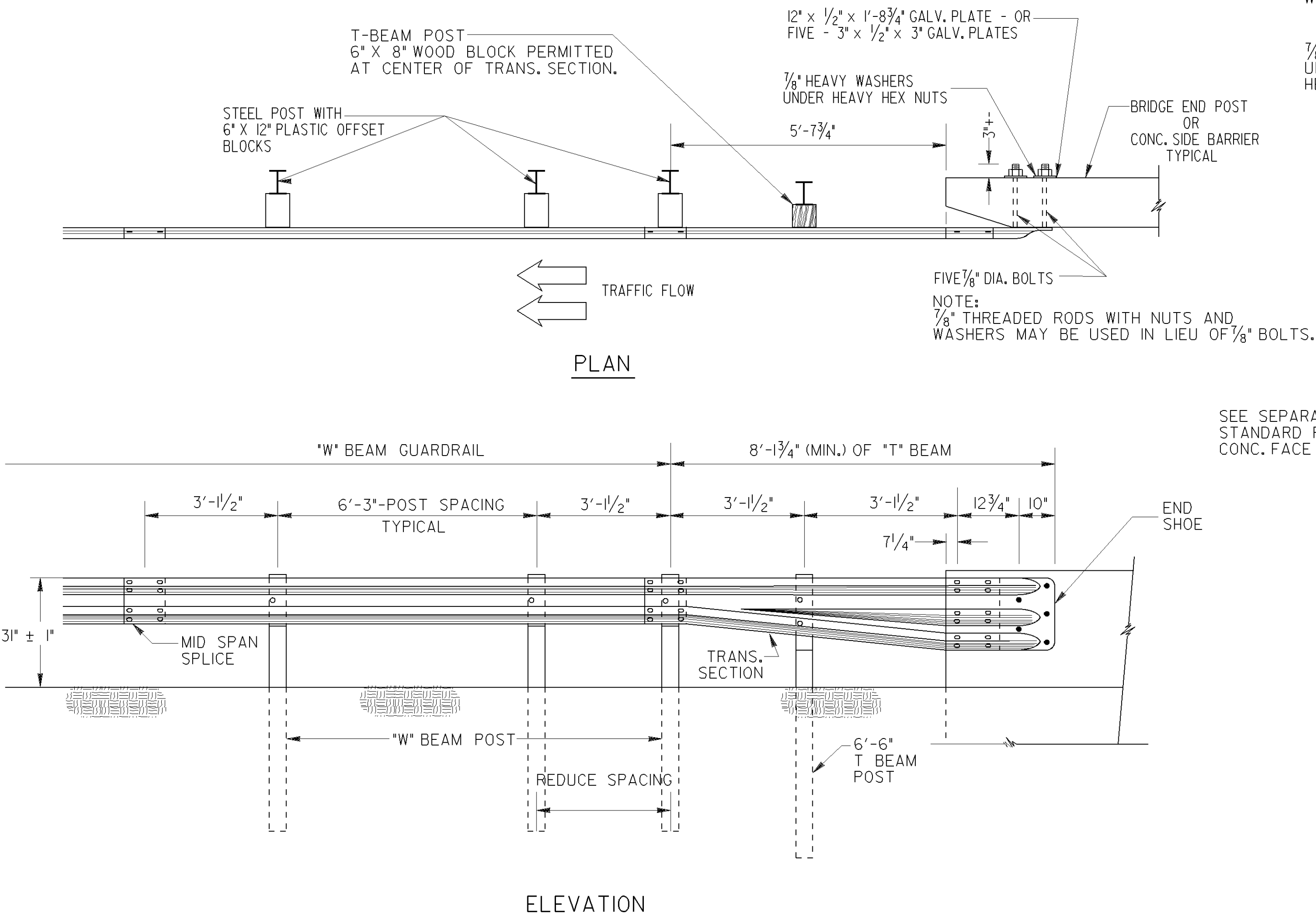
AUGUST 2011

DES. G.L.O. (SUBMITTED) *[Signature]*
DRW. G.L.O. STATE DESIGN POLICY ENGINEER
CHK. B.R.E. (APPROVED) *[Signature]*
REVIEW B.A.S. CHIEF ENGINEER

NUMBER
4381

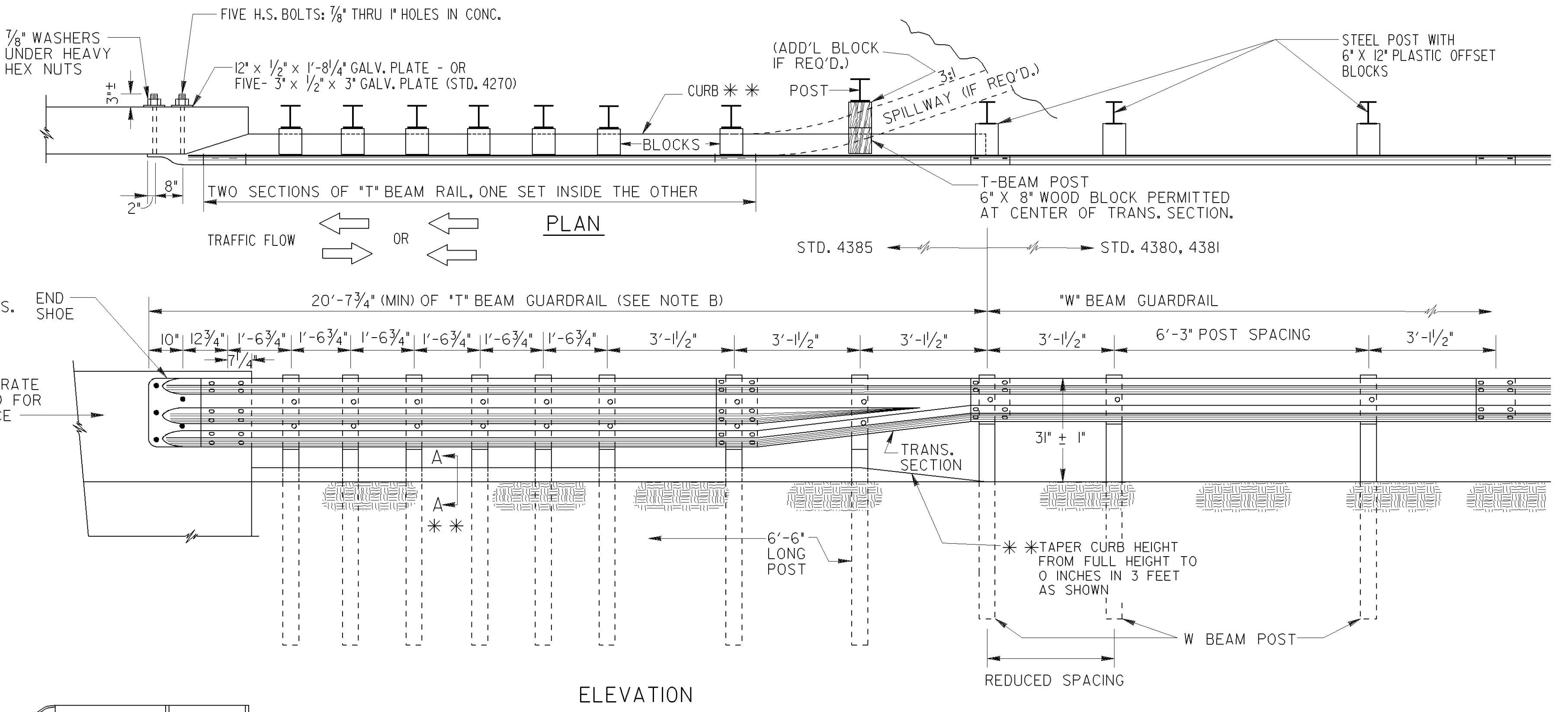
STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	WID 0208-1		

31 INCH HIGH GUARDRAIL CONNECTION AT TRAILING ENDS
(SEE NOTE AT BOTTOM LEFT)



GUARDRAIL CONNECTION AT BRIDGE END (OR CONCRETE BARRIER)

NOTE:
1/8" THREADED RODS WITH NUTS AND WASHERS MAY BE USED IN LIEU OF 1/8" BOLTS.



ELEVATION

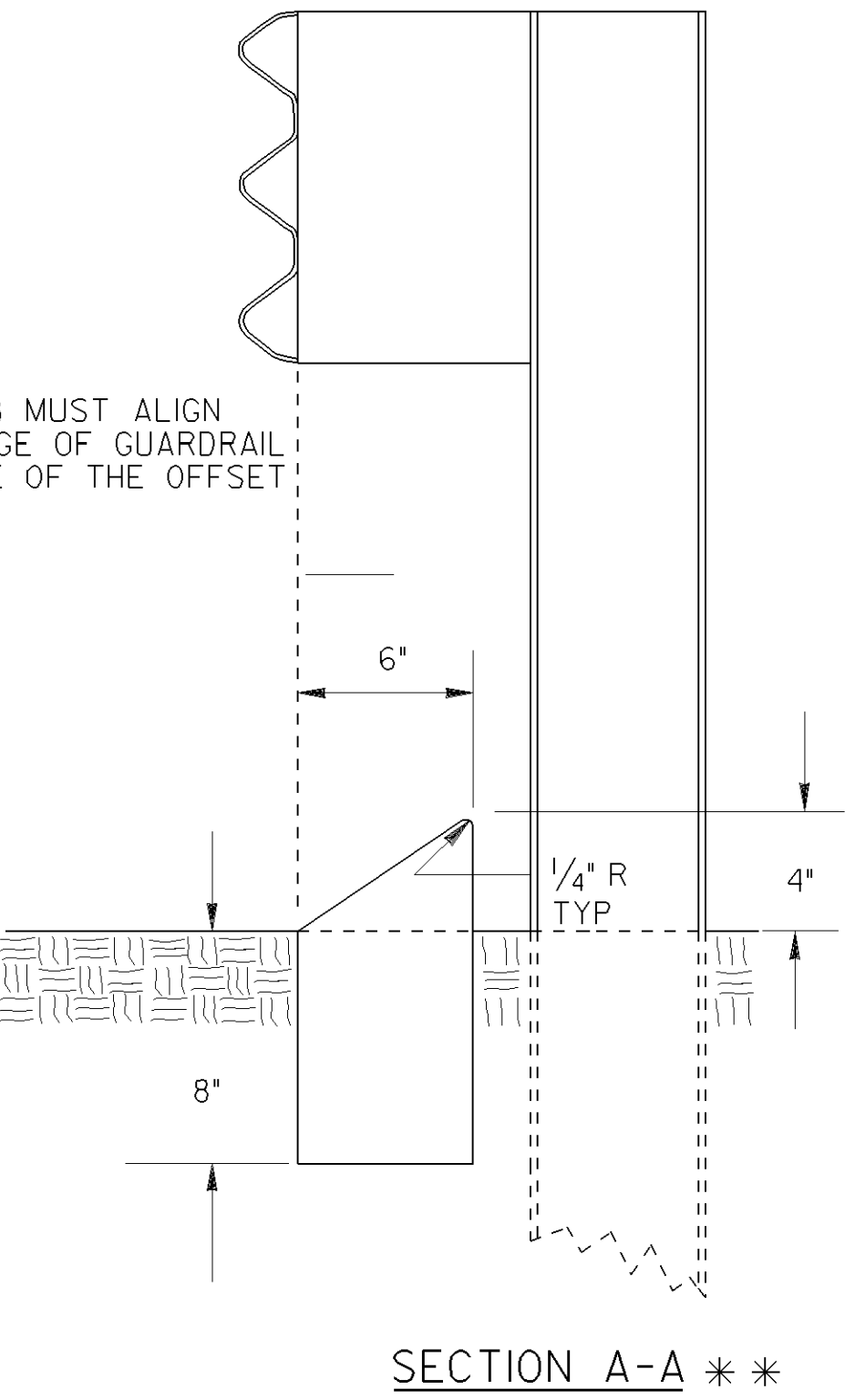
NOTES FOR GUARDRAIL CONNECTION:

- A. WHERE GREATER THAN THE MINIMUM LENGTH OF T-BEAM GUARDRAIL IS REQUIRED ADDITIONAL POST REMAIN AS SHOWN WITHIN THE FIRST 20'-7 3/4" LENGTH, WITH NORMAL (6'-3" C. TO C.) SPACINGS FOR THE REMAINDER OF THE INSTALLATION (STD. 4385) UNLESS SPECIFIED OTHERWISE.
- B. PAYMENT FOR GUARDRAIL TYPE T INCLUDES ALL ADDITIONAL POST, ALL ADDITIONAL OFFSET BLOCKS, THE SPECIAL END SHOE CONNECTION WITH ACCOMPANY HARDWARE, THE EXTRA SECTION OF 'T' BEAM RAIL NESTED INSIDE THE OTHER, AND THE 'T' BEAM TO 'W' BEAM TRANSITION SECTION.
- C. WHERE GUARDRAIL POST ARE ERECTED THRU SPILLWAY, CONCRETE CAP OR PAVING UNDER GUARDRAIL, PAYMENT FOR GUARDRAIL, OF ANY TYPE SHALL INCLUDE REPLACING THE BLOCKED OUT CONCRETE AND/OR REMOVING AND REPLACING PORTIONS OF SPILLWAY, CONCRETE, OR GROUT AS NECESSARY FOR POST INSTALLATIONS.
- * * FOR CURB DETAILS ASSOCIATED WITH APPROACH SLAB, SEE APPROACH SLAB STANDARD. FOR GUARDRAIL INSTALLATION LOCATIONS WHERE AN APPROACH SLAB IS NOT USED, PROVIDE A CONCRETE CURB IN ACCORDANCE WITH SECTION 'A-A'. CONCRETE CURB SHALL BE PAID FOR PER LINEAR FOOT.

NOTE: POST SPACINGS SHOWN ARE TYPICAL AVERAGE WITH NORMAL CONSTRUCTION TOLERANCES ALLOWED.

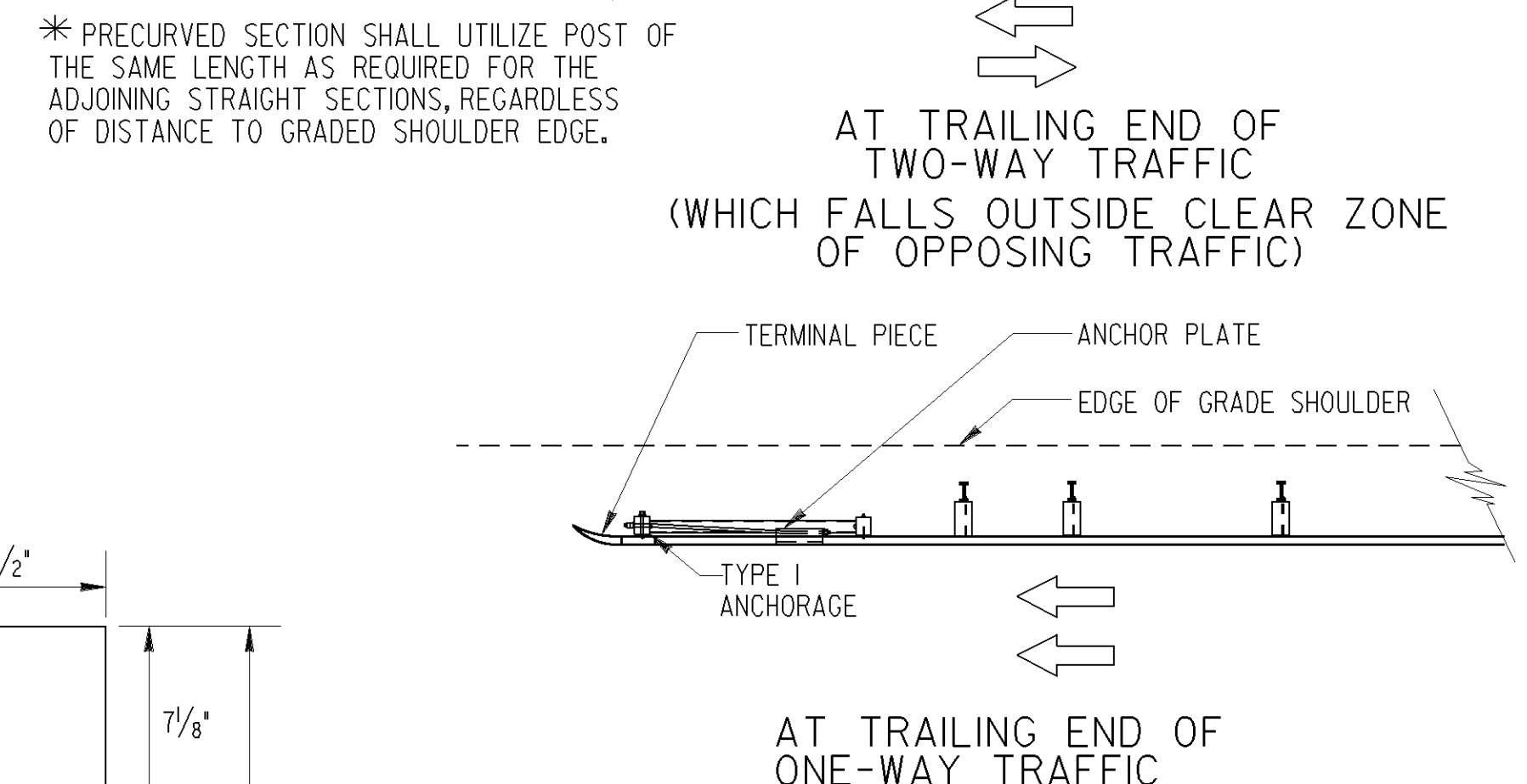
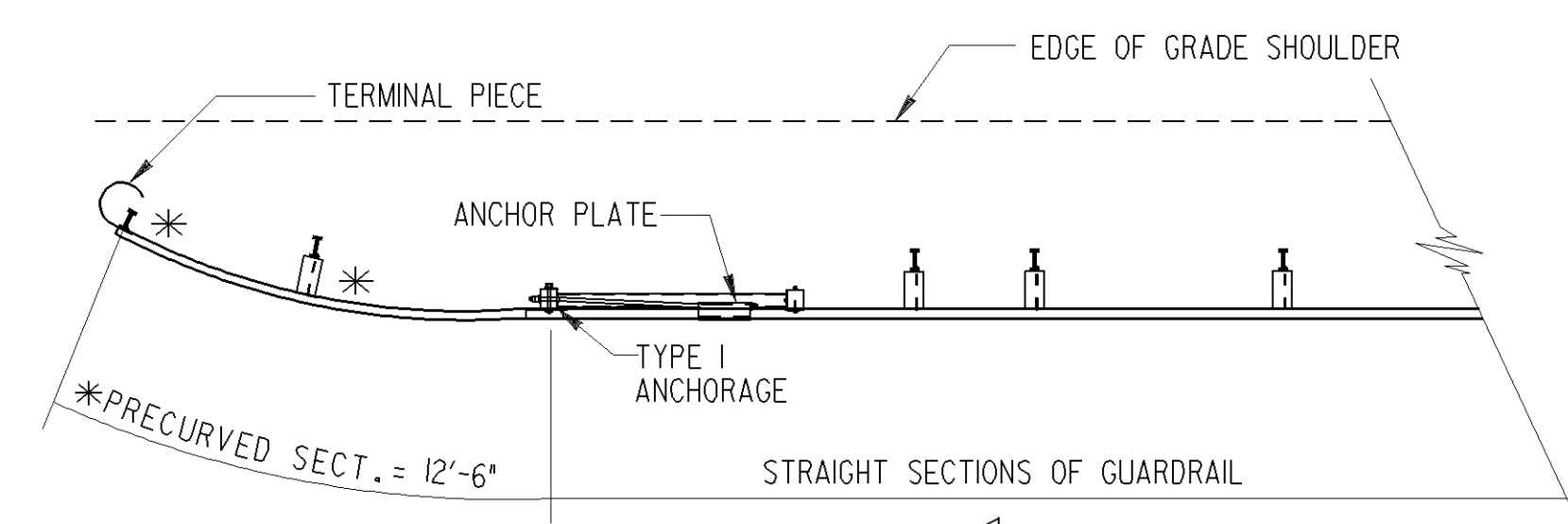
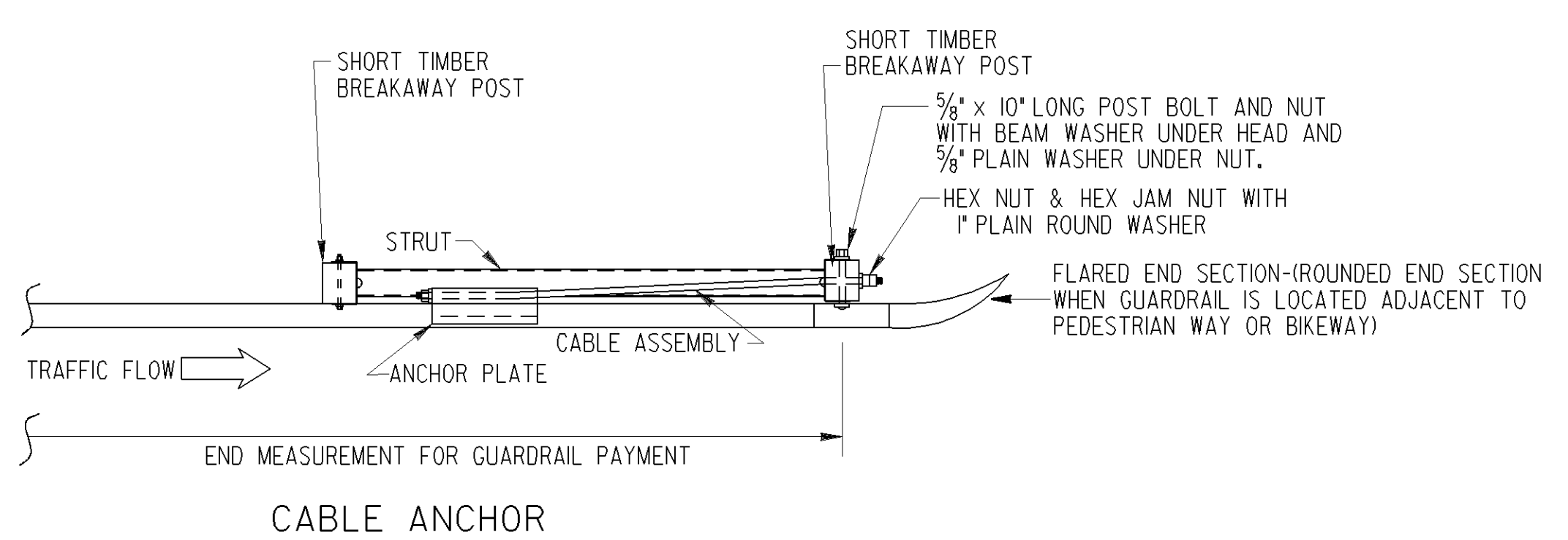
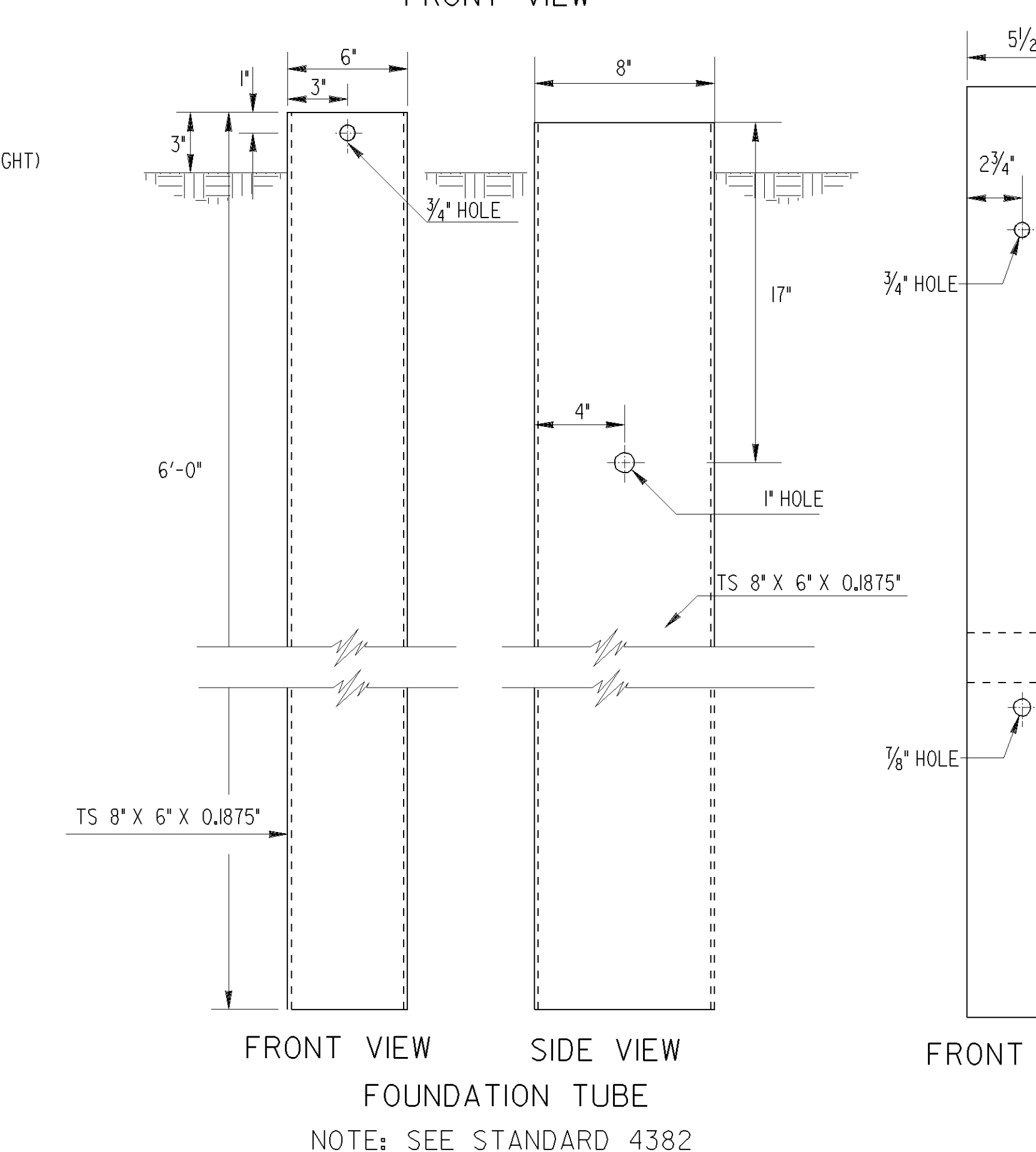
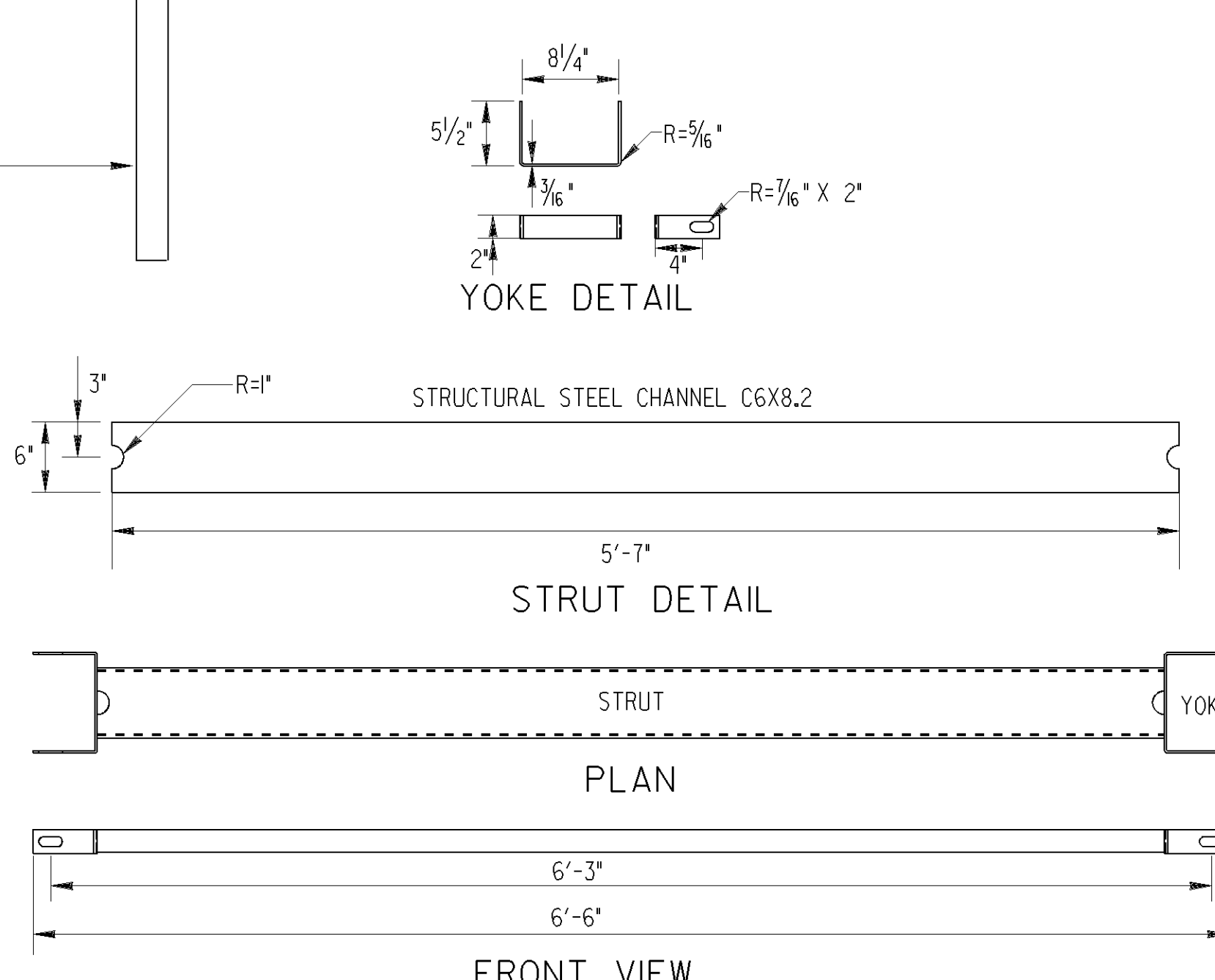
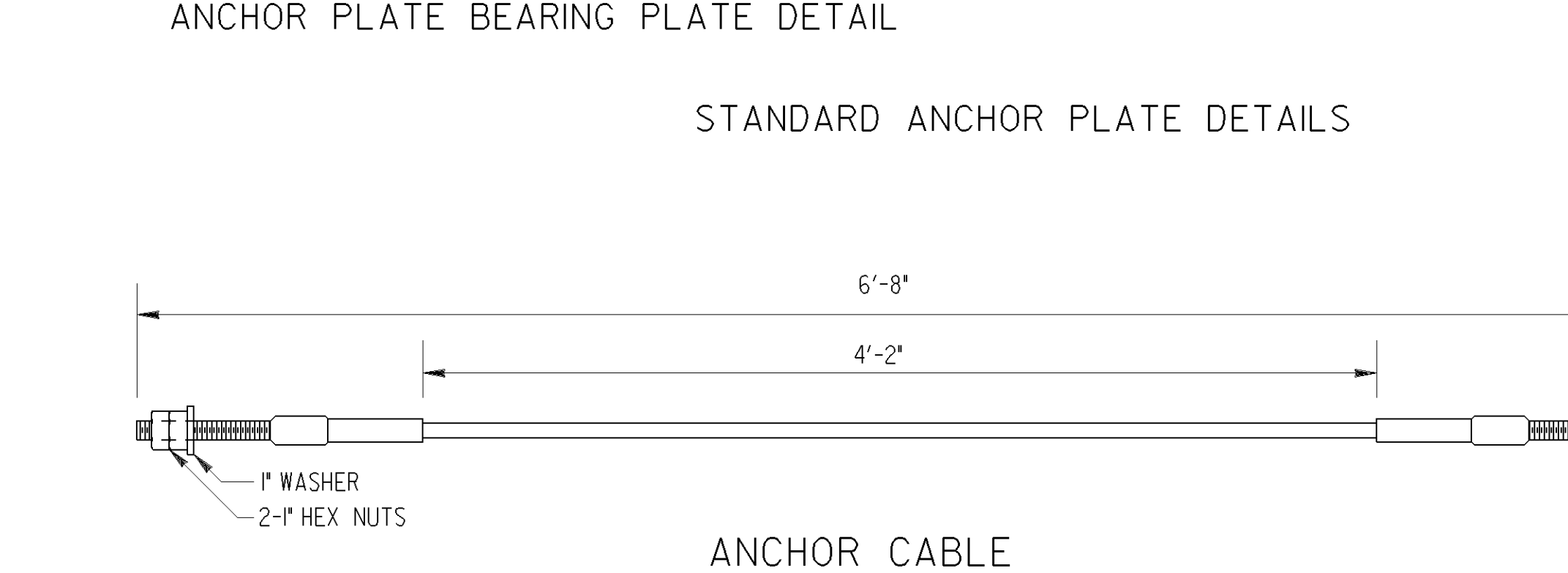
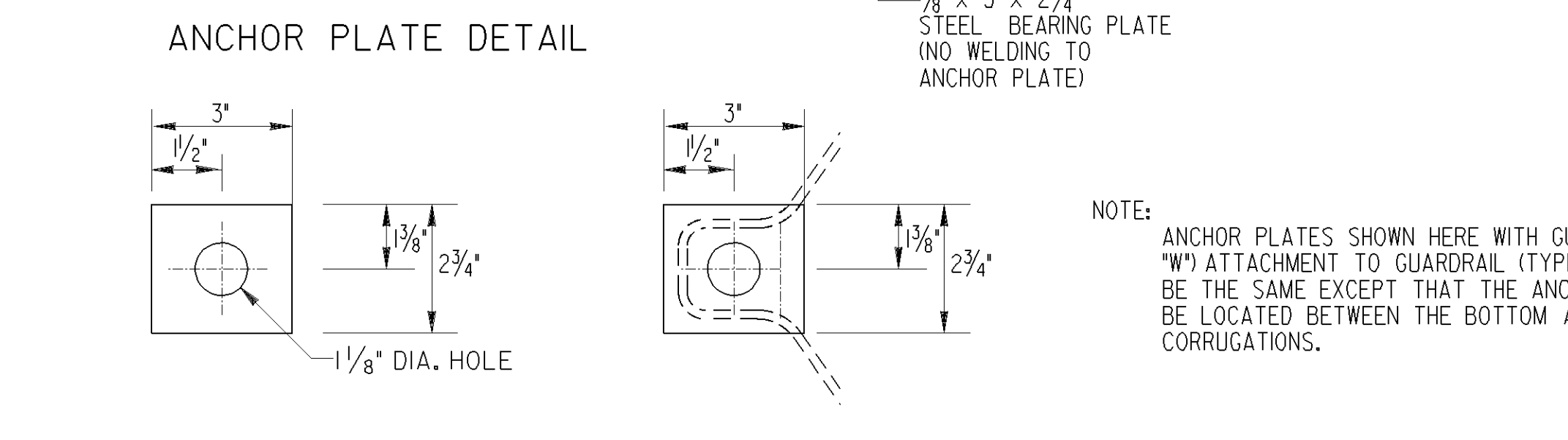
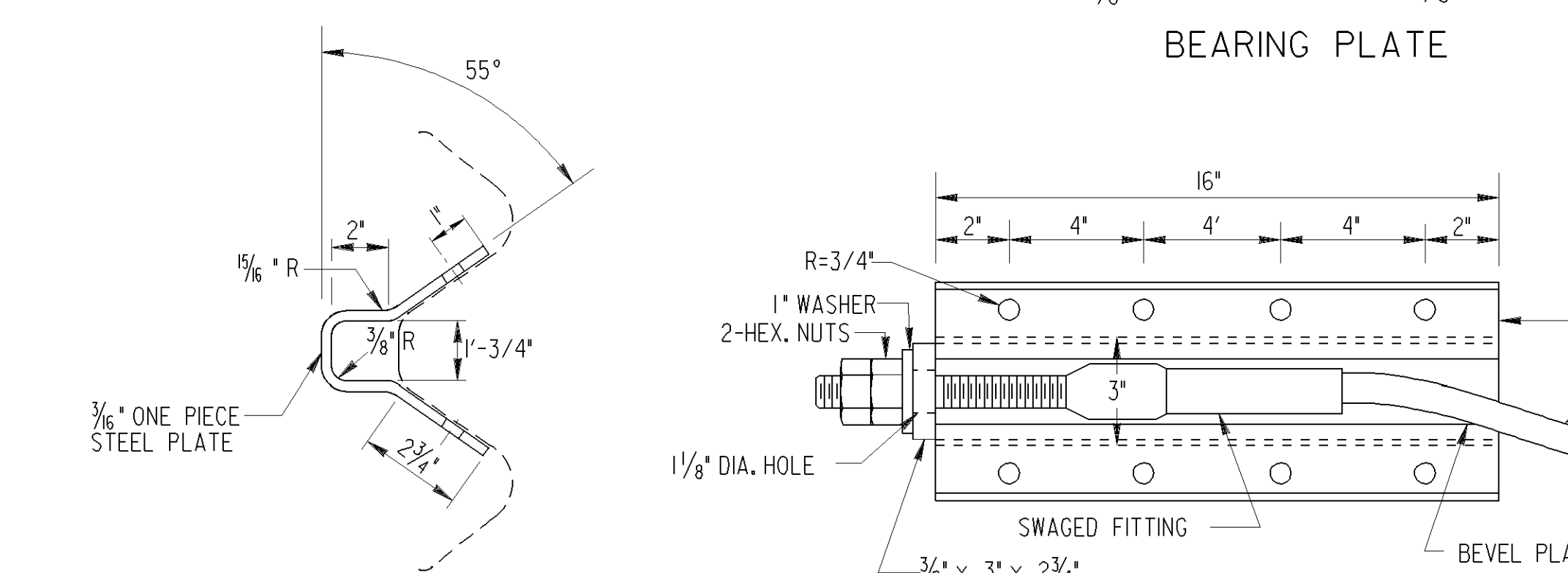
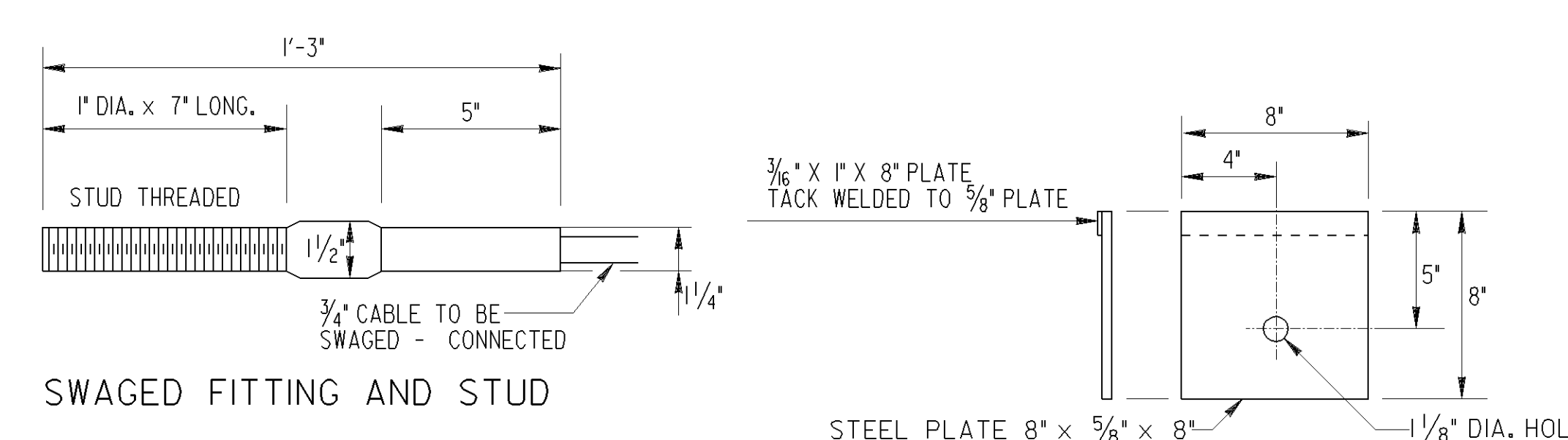
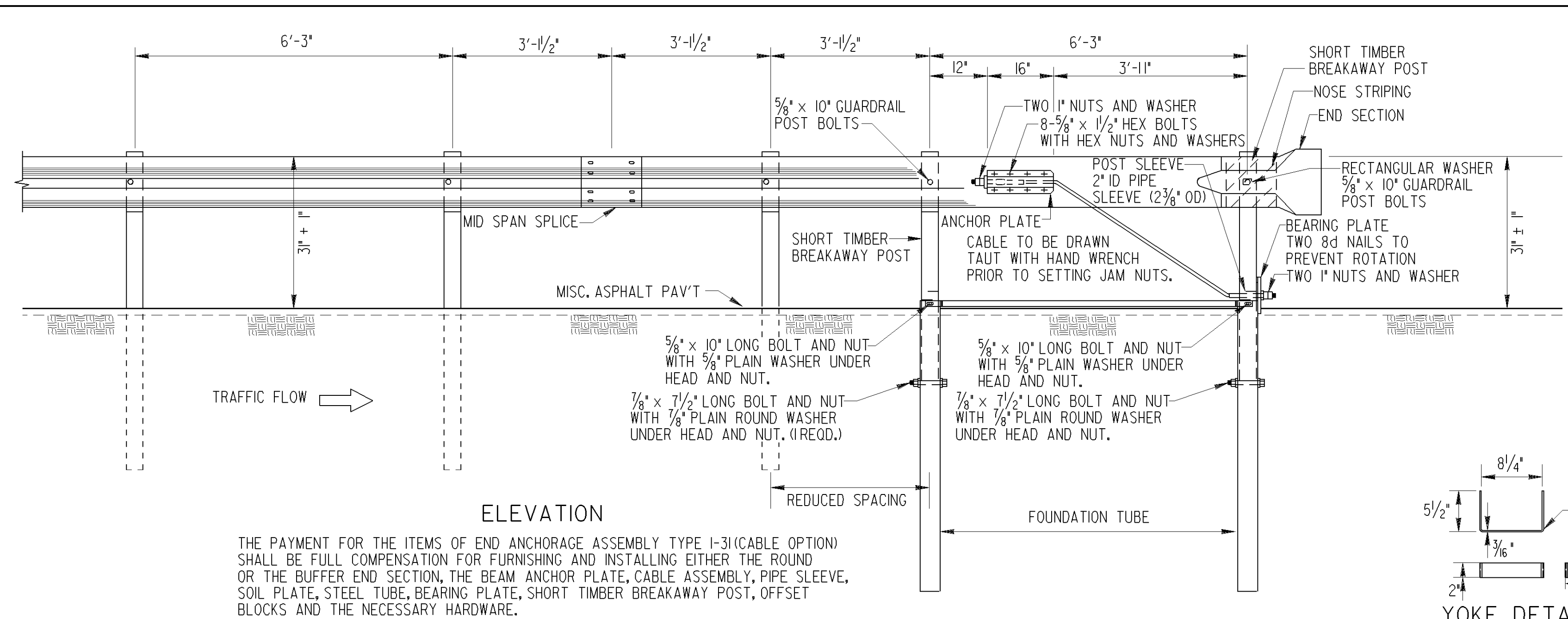
GENERAL NOTES:

- SPECIFICATIONS: GEORGIA STANDARD, CURRENT EDITION & SUPPLEMENTS THERETO.
- FOR DETAILS OF GUARDRAIL HARDWARE, POST, OFFSET BLOCKS, END SHOE, TRANSITION SECTION, ETC., SEE SEPARATE STANDARDS AS APPLICABLE.
- GUARDRAIL INSTALLATIONS, INCLUDING ANCHORAGES AND CONNECTIONS, ARE TO BE COMPLETED BEFORE BEING SUBJECT TO TRAFFIC UNLESS OTHERWISE APPROVED.
- OFFSET BLOCKS SHALL BE PLASTIC UNLESS SPECIFIED OTHERWISE. OFFSET BLOCKS ARE REQUIRED AT ALL POSTS.
- THE COST FOR DRILLING HOLES FOR THE END SHOE CONNECTION SHALL BE INCLUDED IN THE UNIT BID PRICE FOR THE GUARDRAIL.



SECTION A-A * *

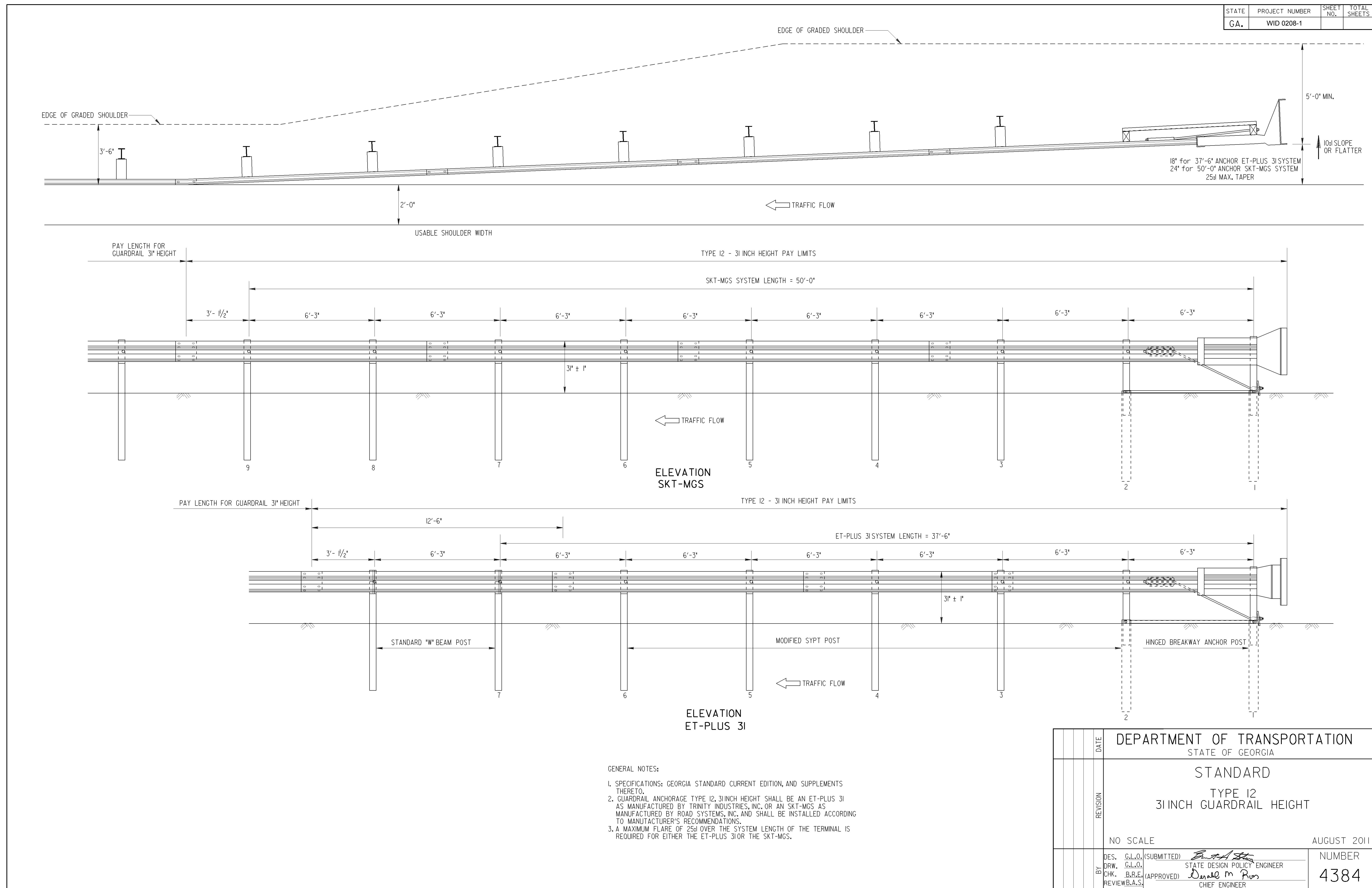
DATE	REVISION	BY	DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA
			STANDARD
			GUARDRAIL CONNECTION AT BRIDGE END OR AT CONCRETE BARRIER END FOR 31 INCH HIGH GUARDRAIL
			NO SCALE
			AUGUST 2011
			DES. G.L.O. (SUBMITTED) <i>B. A. St.</i> DRW. G.L.O. STATE DESIGN POLICY ENGINEER CHK. B.R.E. (APPROVED) <i>Daniel M. Run</i> REVIEWB.A.S. CHIEF ENGINEER
			NUMBER 4382



NOTE:
SEE STD. 4388 OR OTHER APPLICABLE DETAILS FOR REQUIREMENT FOR TYPE 12 ANCHORAGE ON THE TRAILING END.

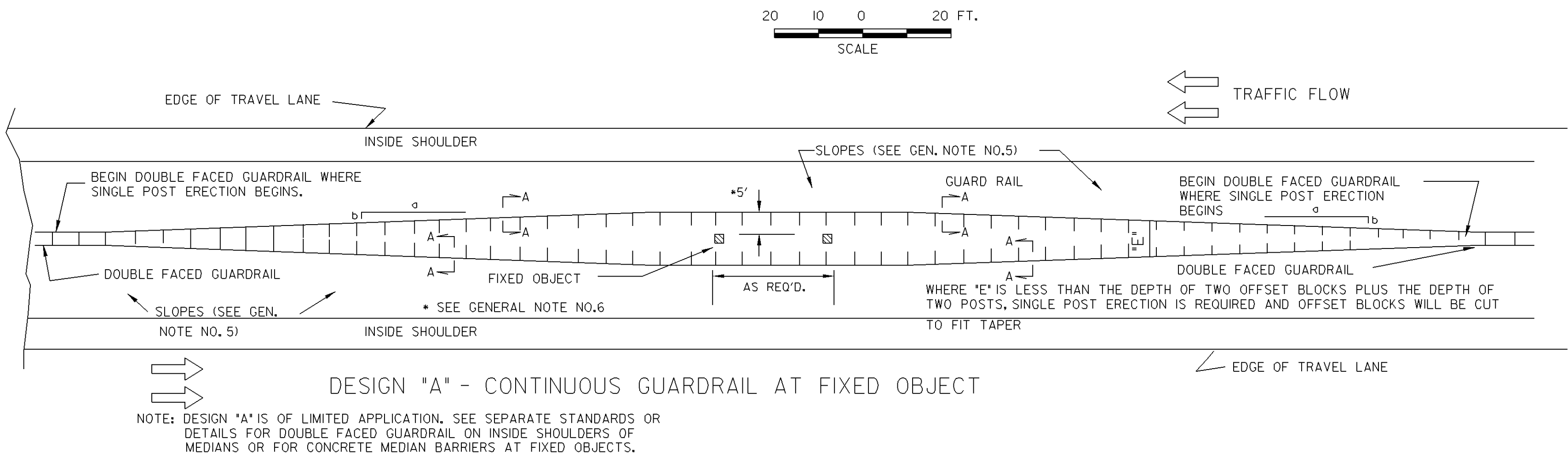
- GENERAL NOTES:**
1. SPECIFICATIONS: GEORGIA STANDARD, CURRENT EDITION & SUPPLEMENTS THERE TO.
 2. FOR DETAILS OF GUARDRAIL HARDWARE, POST, OTHER TYPE ANCHORAGE, LOCATION, ETC. SEE SEPARATE STANDARDS AS APPLICABLE.
 3. GUARDRAIL INSTALLATIONS, INCLUDING ANCHORAGES AND CONNECTIONS, ARE TO BE COMPLETED BEFORE BEING SUBJECT TO TRAFFIC UNLESS OTHERWISE APPROVED.
 4. PAYMENT FOR ANCHORAGE INCLUDES: ANCHOR PLATE; 3/4" CABLE; BREAKAWAY POSTS; FOUNDATION TUBES; STRUT AND ALL ACCOMPANYING HARDWARE.

		DATE	DEPARTMENT OF TRANSPORTATION	
			STATE OF GEORGIA	
		REVISION	STANDARD	
			GUARDRAIL ANCHORAGE TYPE I 31 INCH GUARDRAIL HEIGHT	
			NO SCALE	AUGUST 2011
BY	DES.	G.L.O.	(SUBMITTED)	NUMBER 4383
	DRW.	G.L.O.	STATE DESIGN POLICY ENGINEER	
	CHK.	B.R.E.	(APPROVED)	
	REVIEW	B.A.S.	CHIEF ENGINEER	

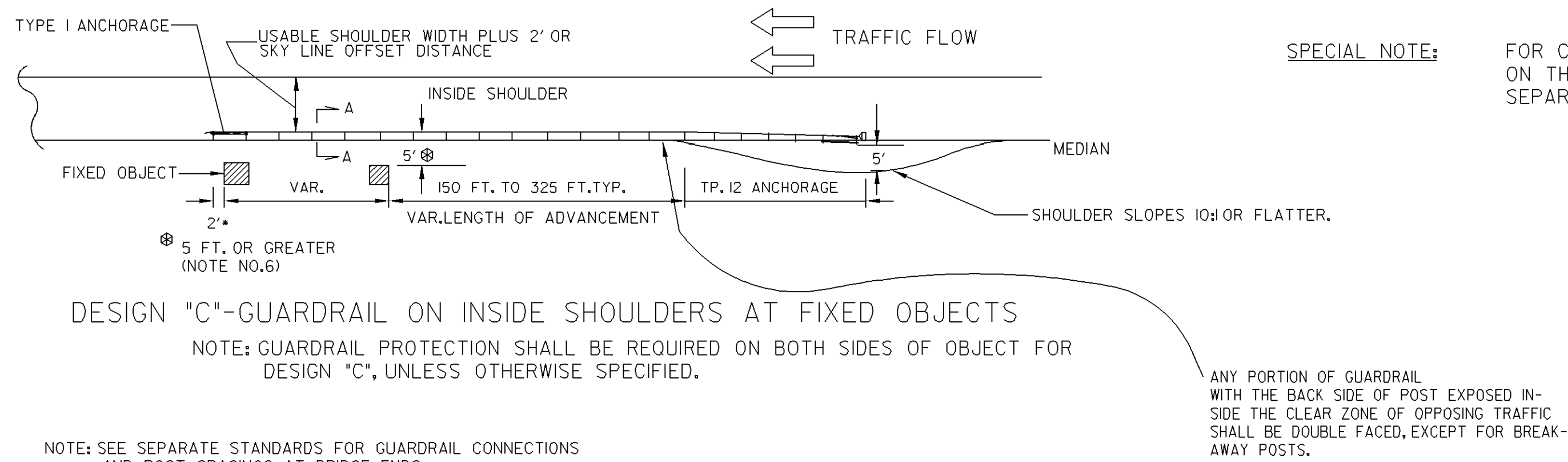
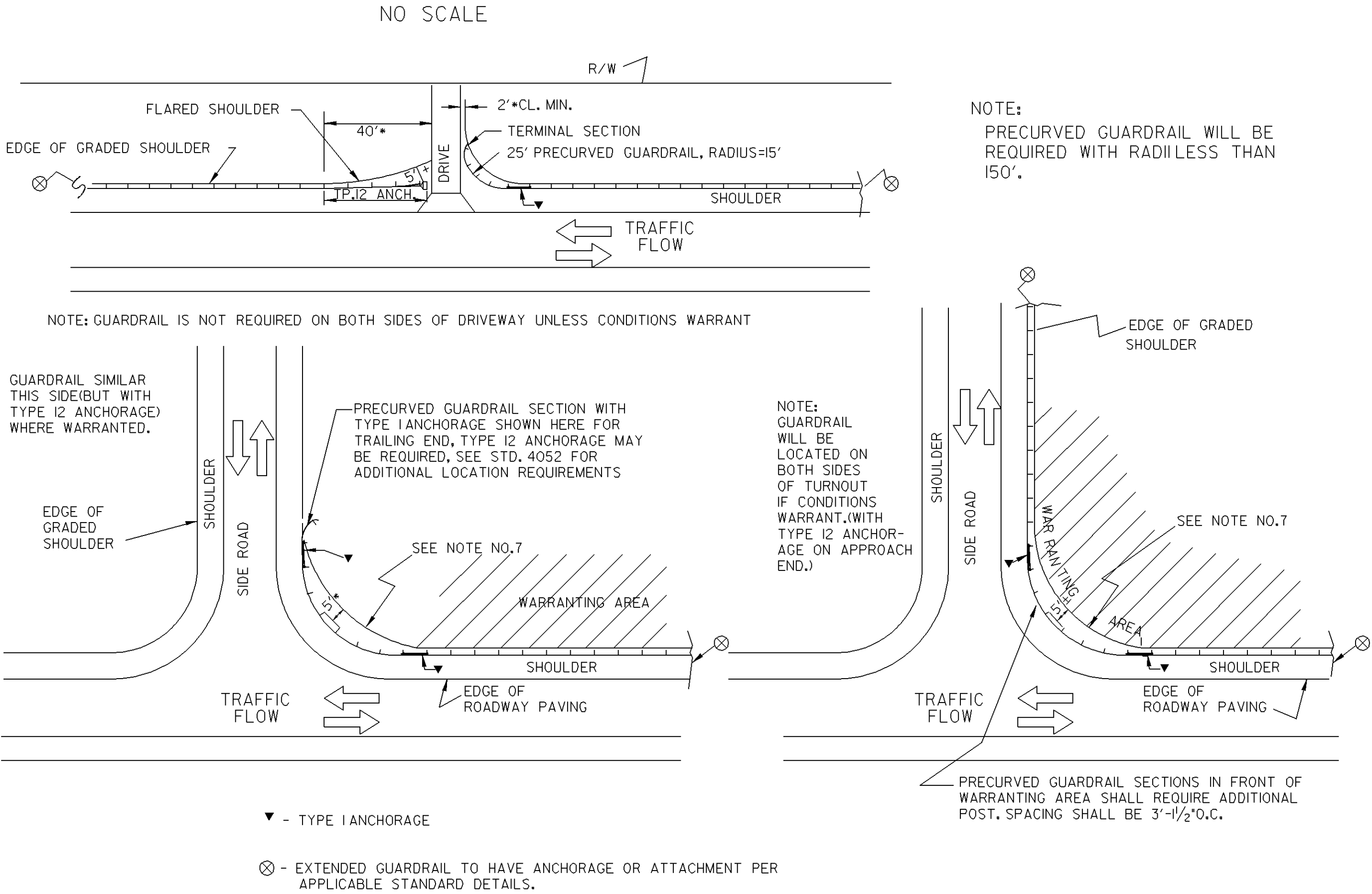


		DATE	DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA	
		REVISION	STANDARD "T" BEAM GUARDRAIL CONNECTION TO 31 INCH HEIGHT "W" BEAM	
			NO SCALE	AUGUST 2011
BY	DES. G.L.O. DRW. G.L.O. CHK. B.R.E. REVIEW B.A.S.	(SUBMITTED) <i>[Signature]</i> STATE DESIGN POLICY ENGINEER (APPROVED) <i>[Signature]</i> CHIEF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

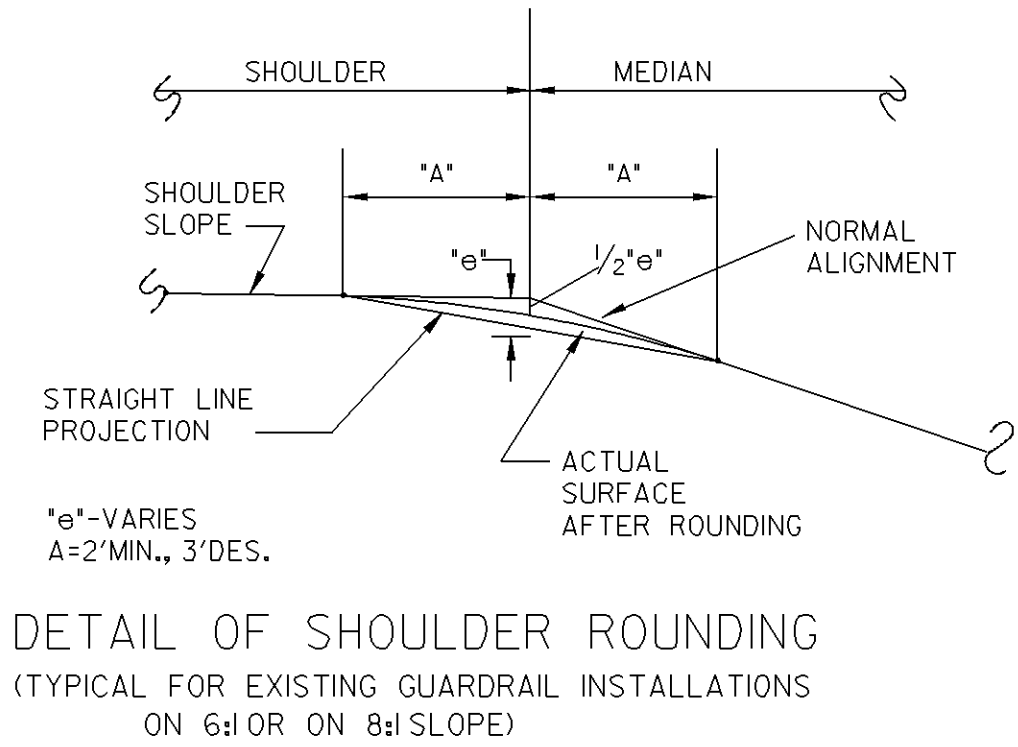
GUARDRAIL LOCATIONS IN MEDIANS



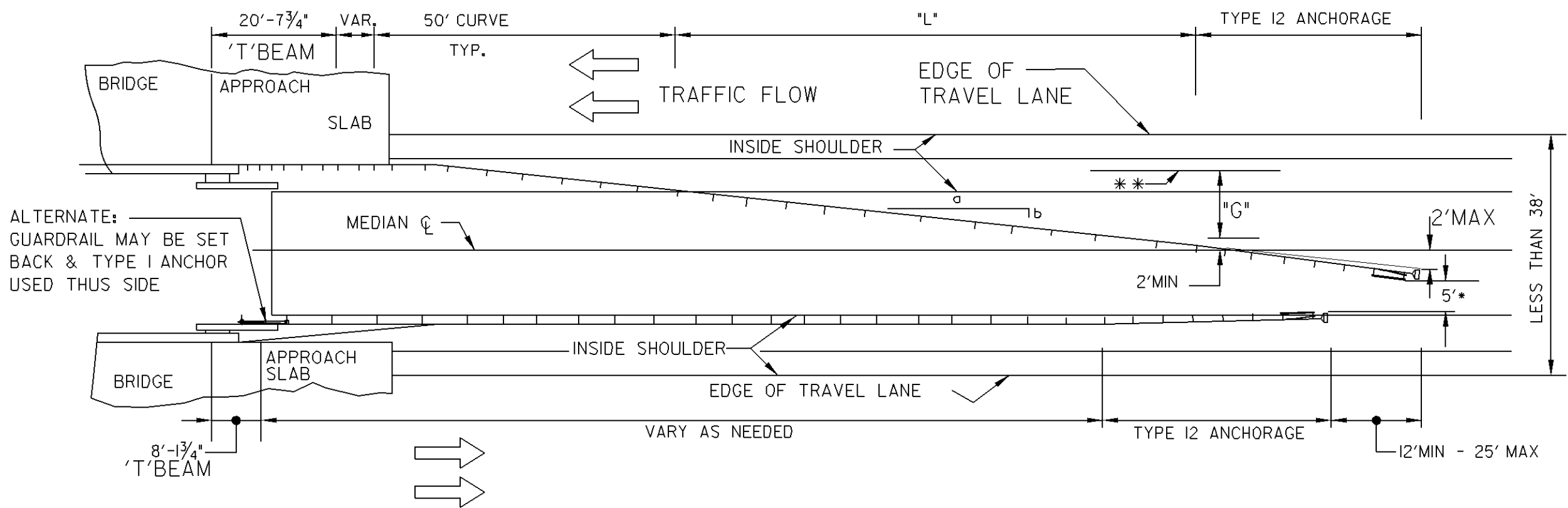
GUARDRAIL LOCATIONS AT TURNOUTS



FLARE RATE: DESIGN "A", "B", & "D"	
DESIGN SPEED (mph)	MAX. FLARE RATE a/b
70	15
60	13
50	11
40	9
30	7



- 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 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 ANCHORAGES 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 RADIi AT 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.

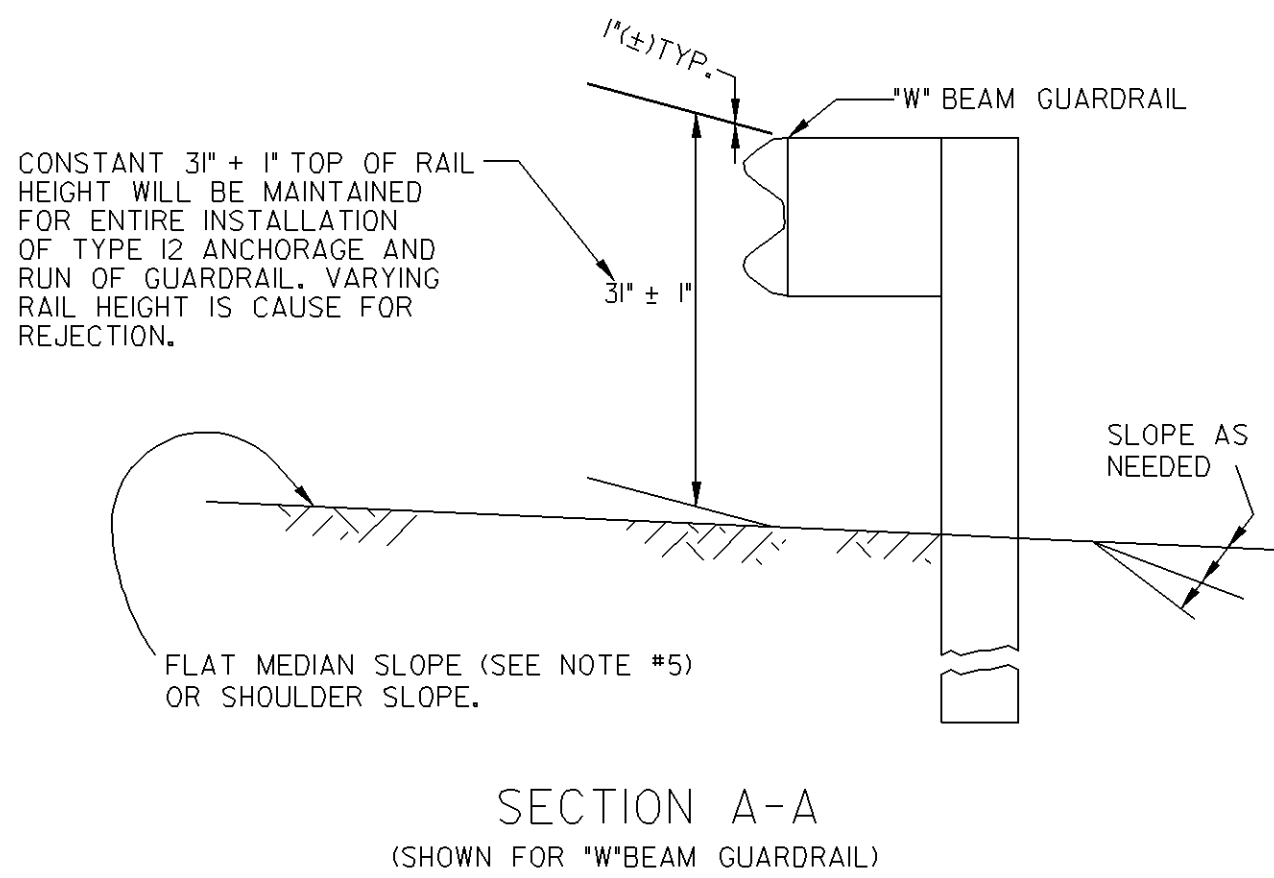


** PROJECTION FROM FACE OF GUARDRAIL AT BRIDGE END

G = DISTANCE FROM ** TO WITHIN 2' OF MEDIAN CL

MIN 'L' = *G*(a/b) - 25'

FOR MINIMUM FLARE a/b SEE CHART AT TOP.



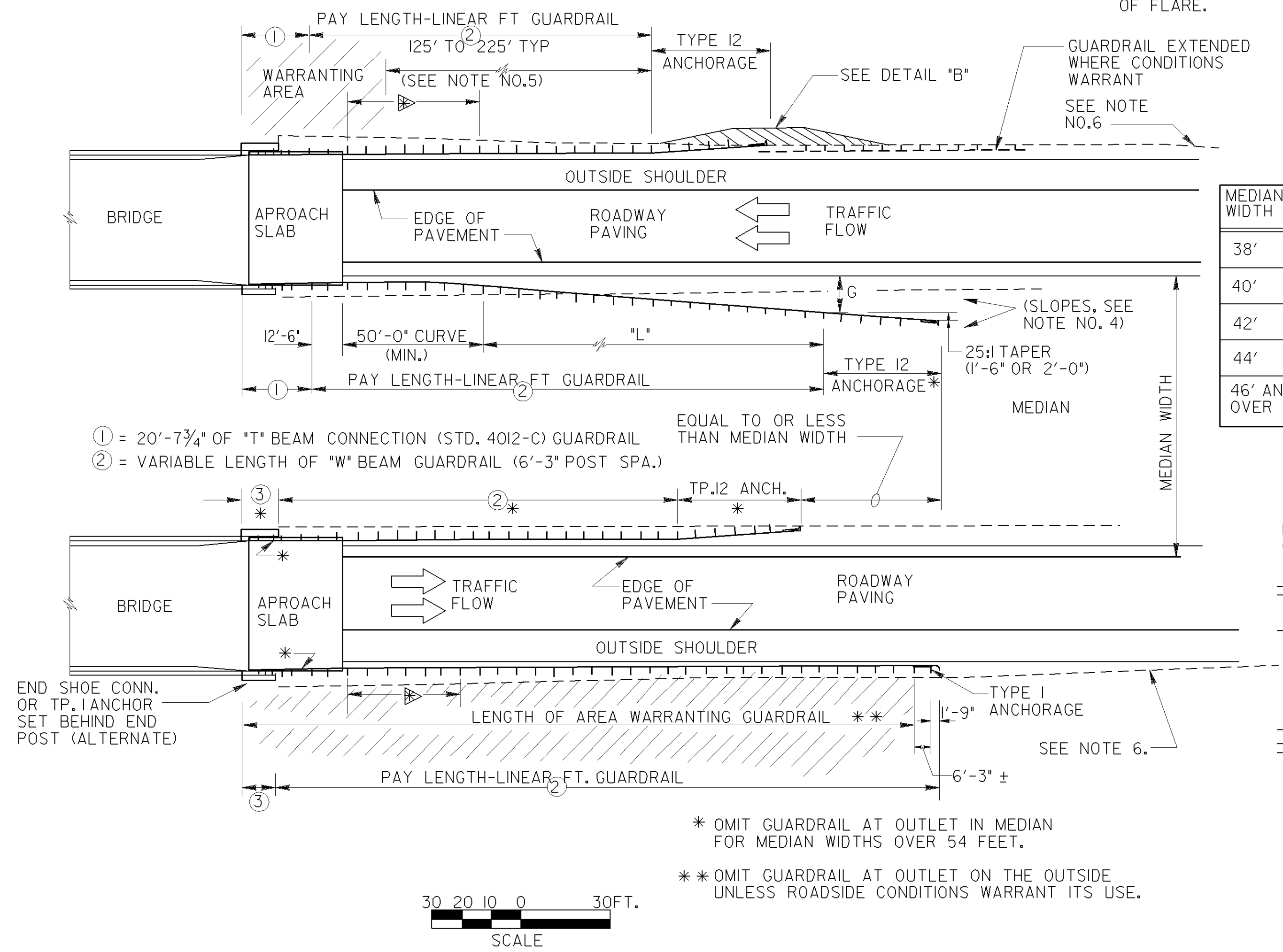
DESIGN "D" IS LIMITED FOR USE WHERE THE GRASSED MEDIAN AT BRIDGE APPROACHES IS ALMOST FLUSH (SLOPES NOT STEEPER THAN 20:1) AND MEDIAN IS LESS THAN 38 FT. IN WIDTH FOR OTHER CONDITIONS, SEE STD. 4387 OR CONSTRUCTION DETAILS.

⊕ FOR WIDER MEDIANS, SEE STD. 4051

	DATE	DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA	
	REVISION	STANDARD GUARDRAIL LOCATIONS IN MEDIANS GUARDRAIL LOCATIONS AT TURNOUTS 31 INCH GUARDRAIL HEIGHT	
		SCALE: AS SHOWN	AUGUST 2011
BY	DES. G.L.O. (SUBMITTED)	NUMBER	
CHK. B.R.E.	DRW. G.L.O.	4386	
REVIEW B.A.S.	CH. B.R.E.		
	STATE DESIGN POLICY ENGINEER		
	(APPROVED) <i>Daniel M. Run</i>		
	CHIEF ENGINEER		

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	WID 0208-1		

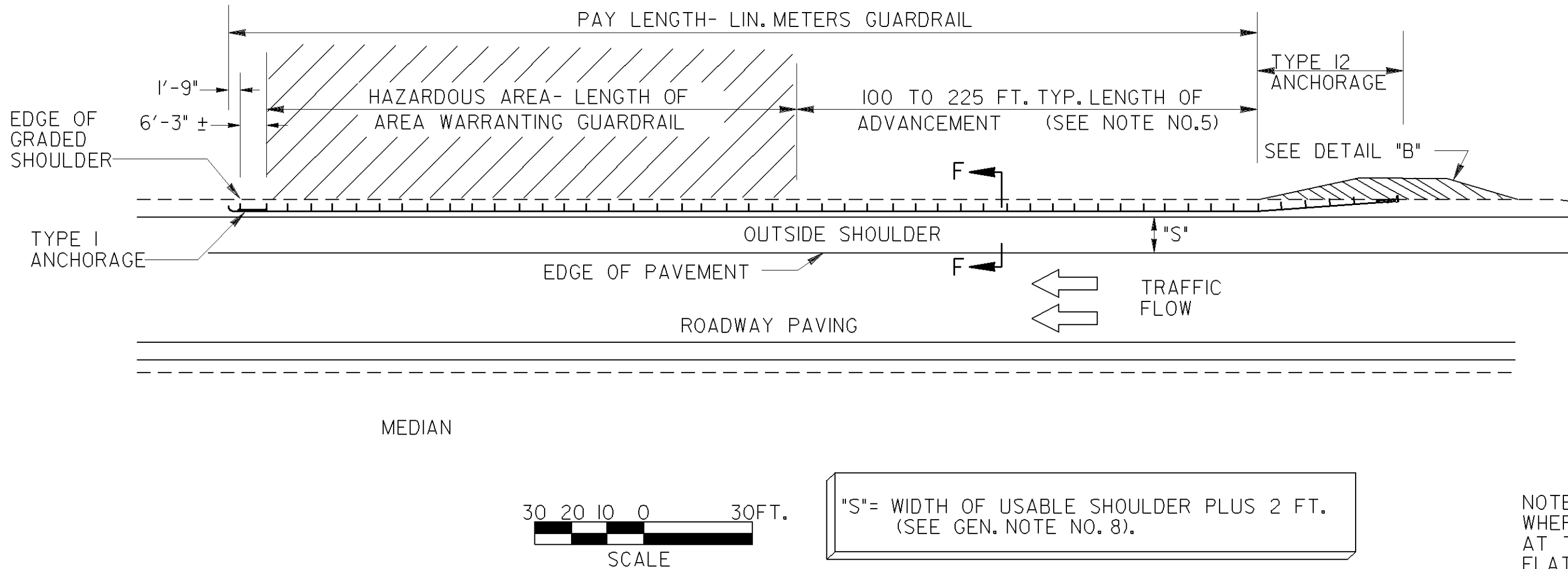
GUARDRAIL LOCATION AT BRIDGE ENDS



③ = 8'-13/4" OF T BEAM (END SHOE & TRANSITION SECTION) - OR TYPE I ANCHOR., SET BEHIND END POST & CONNECTED TO W - BEAM.

- WHERE THE OUTSIDE SHOULDER WIDTH IS REDUCED ACROSS BRIDGE:
- a) SHORT INSTALLATION (LESS THAN 200' TOTAL) OF GUARDRAIL SHALL HAVE STRAIGHT ALIGNMENT;
 - b) LONGER INSTALLATION SHALL BE TRANSITIONED, STARTING 33' +/- FROM BRIDGE END, TO THE "S" OFFSET PER FLARE DETAIL.

GUARDRAIL LOCATION ALONG ROADWAY

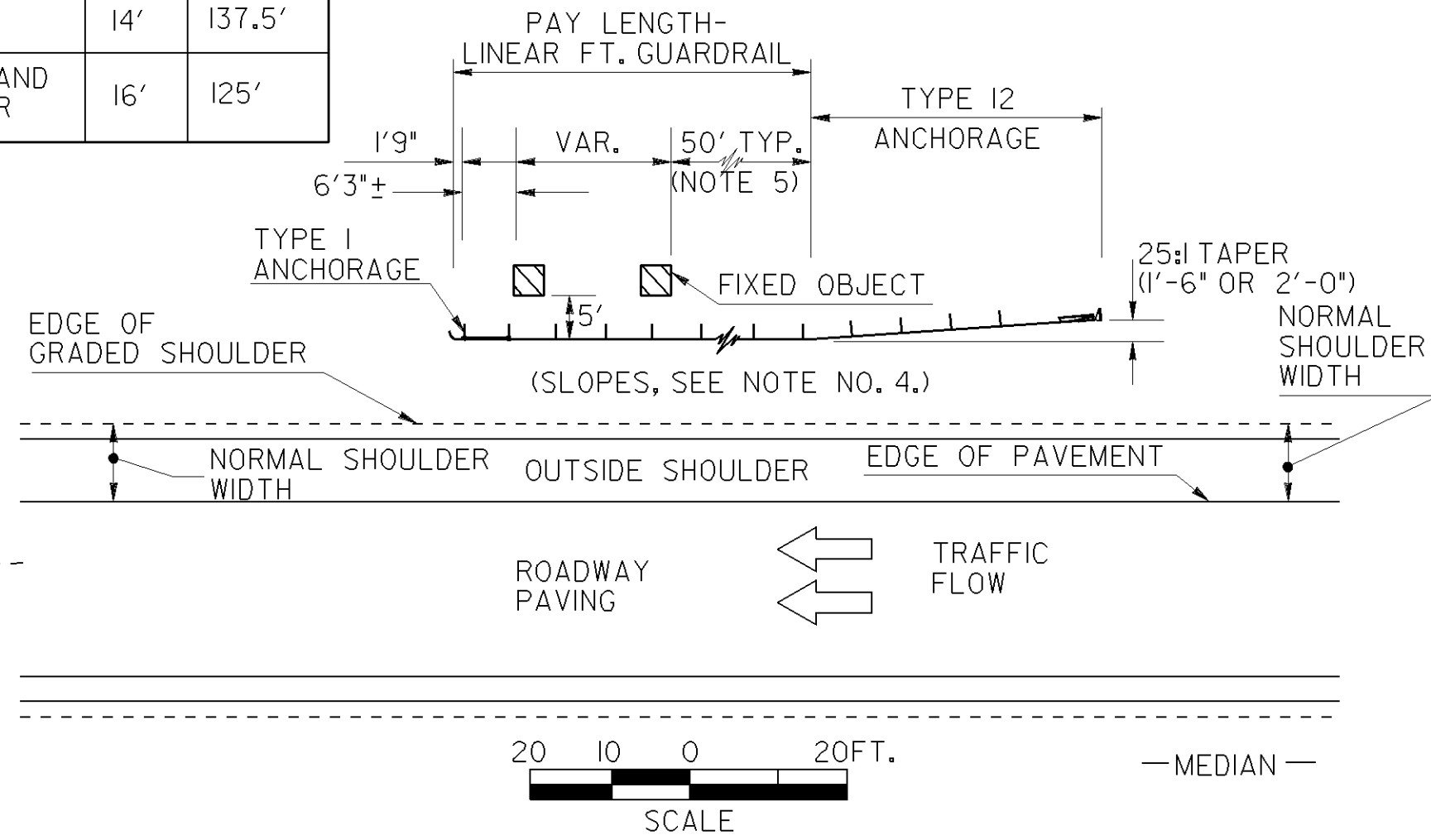


FLARE DETAIL

FLARE RATE	
MPH	a/b(MIN.)
70	15:1
60	13:1
50	11:1
40	9:1

MEDIAN WIDTH	G	MIN. L
38'	8'	200'
40'	10'	175'
42'	12'	150'
44'	14'	137.5'
46' AND OVER	16'	125'

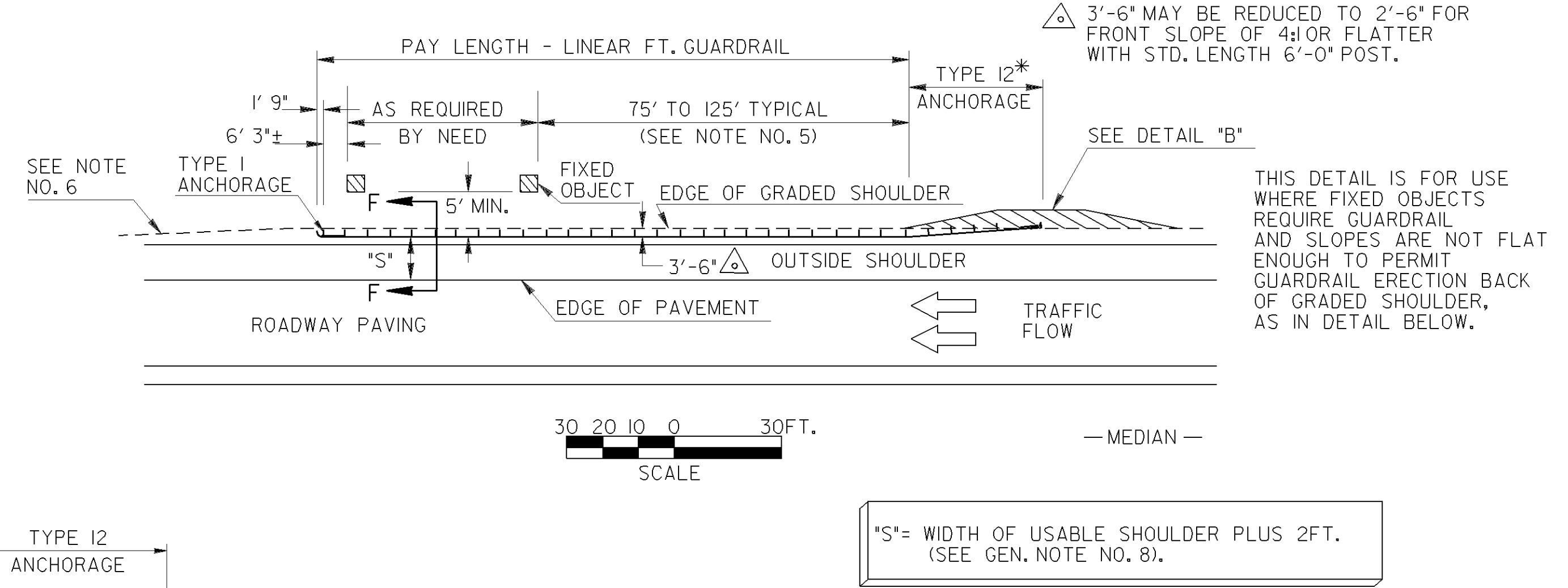
NOTE: FOR DETAILS OF GUARDRAIL PROTECTION OF FIXED OBJECTS IN THE MEDIAN, SEE STANDARD *4055. FOR DETAILS OF CONCRETE BARRIERS, SEE STANDARDS 4940, 4948, OR OTHER APPLICABLE DETAILS.



NOTE: DETAIL ABOVE APPLIES WHERE OBJECT FALLS WITHIN THE CLEAR ZONE WIDTH AND SLOPES IN FRONT OF THE OBJECT ALLOW GUARDRAIL INSTALLATION BACK OF THE GRADED SHOULDER. SEE GENERAL NOTE NO. 4.

GUARDRAIL LOCATION IN FRONT OF FIXED HAZARDS

(FOR USE WHERE FIXED OBJECTS ALONG THE OUTSIDE OF THE ROADWAY ARE WITHIN THE CLEAR ZONE WIDTH AND CONCRETE SIDE BARRIER IS NOT USED)



GENERAL NOTES:

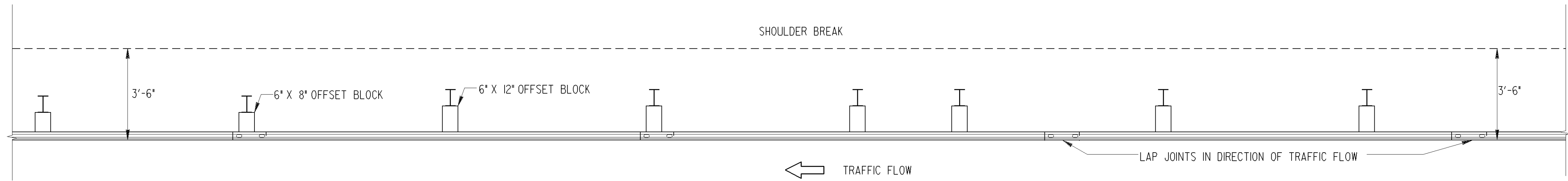
- SPECIFICATIONS: GEORGIA STANDARD, CURRENT EDITION, & SUPPLEMENTS THERETO.
- POST SPACINGS SHALL BE 6'-3" C. TO C. EXCEPT WHERE REDUCED SPACINGS ARE SPECIFIED AT BRIDGE ENDS OR AT FIXED HAZARDS.
- FOR DETAILS OF GUARDRAIL, ACCESSORIES, POSTS, OFFSET BLOCKS, ANCHORAGES, ETC., SEE APPLICABLE STANDARD AND/OR CONSTRUCTION DETAILS.
- NEGATIVE SLOPES IN FRONT OF GUARDRAIL AND TYPE I2 ANCHORAGES SHALL BE 10:1 OR FLATTER.
- GUARDRAIL SHALL BEGIN IN ADVANCE OF A HAZARD OR HAZARDOUS AREA BY A SUFFICIENT LENGTH TO PREVENT VEHICLE PENETRATION BEHIND THE RAIL INTO PROTECTED AREA. THE TYPICAL LENGTHS OF ADVANCEMENT SHOWN MAY BE INCREASED OR DECREASED WHEN SHOWN IN THE PLANS, OR WHERE DIRECTED BY THE ENGINEER BECAUSE OF SPEED DESIGN, ROADSIDE GEOMETRICS, GRADES, SIZE OF HAZARD, OR OTHER CONDITIONS; IF FURTHER INFORMATION IS DESIRED, SEE AASHTO "ROADSIDE DESIGN GUIDE."
- WHERE GUARDRAIL IS REQUIRED ON THE SHOULDER, THE SHOULDER WILL BE GRADED WIDER AS SHOWN IN DETAIL "B".
- GAPS OF LESS THAN 200 FT. BETWEEN GUARDRAIL INSTALLATIONS SHOULD BE AVOIDED EXCEPT WHERE JUSTIFIED BY LOCAL CONDITIONS.
- "S" IS THE OFFSET TO FACE OF GUARDRAIL. THIS WILL BE TWO FT. GREATER THAN THE NORMAL USABLE SHOULDER WIDTH (WITHOUT GUARDRAIL). HOWEVER, IF THE NORMAL GRADED SHOULDER WIDTH (WITHOUT GUARDRAIL) IS GREATER THAN REQUIRED BY AASHTO, "S" DISTANCE MAY BE ESTABLISHED AS TWO (2) FT. GREATER THAN THE AASHTO SHOULDER WIDTH.
- OFFSET FROM RAIL FACE TO HAZARD FACE SHALL BE 5' +/- DESIRABLE AND 4'-3" MINIMUM. THIS OFFSET MAY BE REDUCED TO 3'-0" MIN. BY USING 3'- 1/2" POST SPACINGS IN FRONT OF HAZARD WITH A MINIMUM OF 7 SUCH SPACINGS IN ADVANCE OF HAZARD.

SPECIAL NOTE: LOCATION AND QUANTITIES GIVEN IN THE PLANS FOR GUARDRAIL AND ANCHORAGES ARE ESTIMATES MADE FROM OFFICE COMPUTATIONS. A FINAL DETERMINATION AS TO LOCATIONS AND QUANTITIES OF GUARDRAIL AND ANCHORAGES WILL BE MADE BY THE ENGINEER OR A REPRESENTATIVE FROM THE OFFICE OF TRAFFIC AND SAFETY AFTER CONSTRUCTION OF ROADWAY.

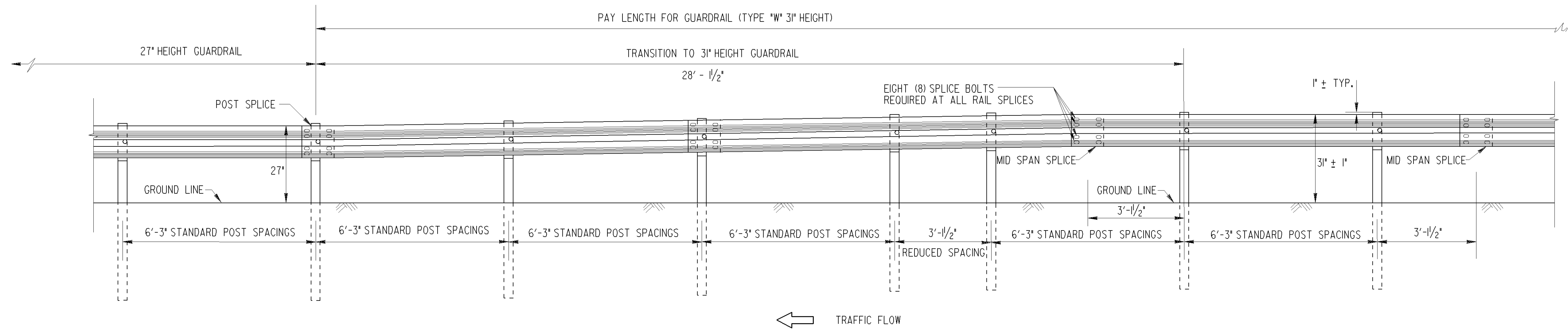
* OR APPROVED ALTERNATE, MEETING MANUAL FOR ASSESSING SAFETY HARDWARE (MASH) REQUIREMENTS

		DATE	DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA	
		REVISION	STANDARD GUARDRAIL LOCATION DETAILS FOR MULTI-LANE DIVIDED HIGHWAYS (WITH SHOULDERS ADJACENT TO ROADWAY) 31 INCH GUARDRAIL HEIGHT SCALE: AS SHOWN AUGUST 2011	
		BY	DES. G.L.O. (SUBMITTED) <i>B. A. H.</i> CHK. G.L.O. STATE DESIGN POLICY ENGINEER REVIEW B.A.S. (APPROVED) <i>Daniel M. R...</i> CHIEF ENGINEER	NUMBER 4387

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	WID 0208-1		



PLAN



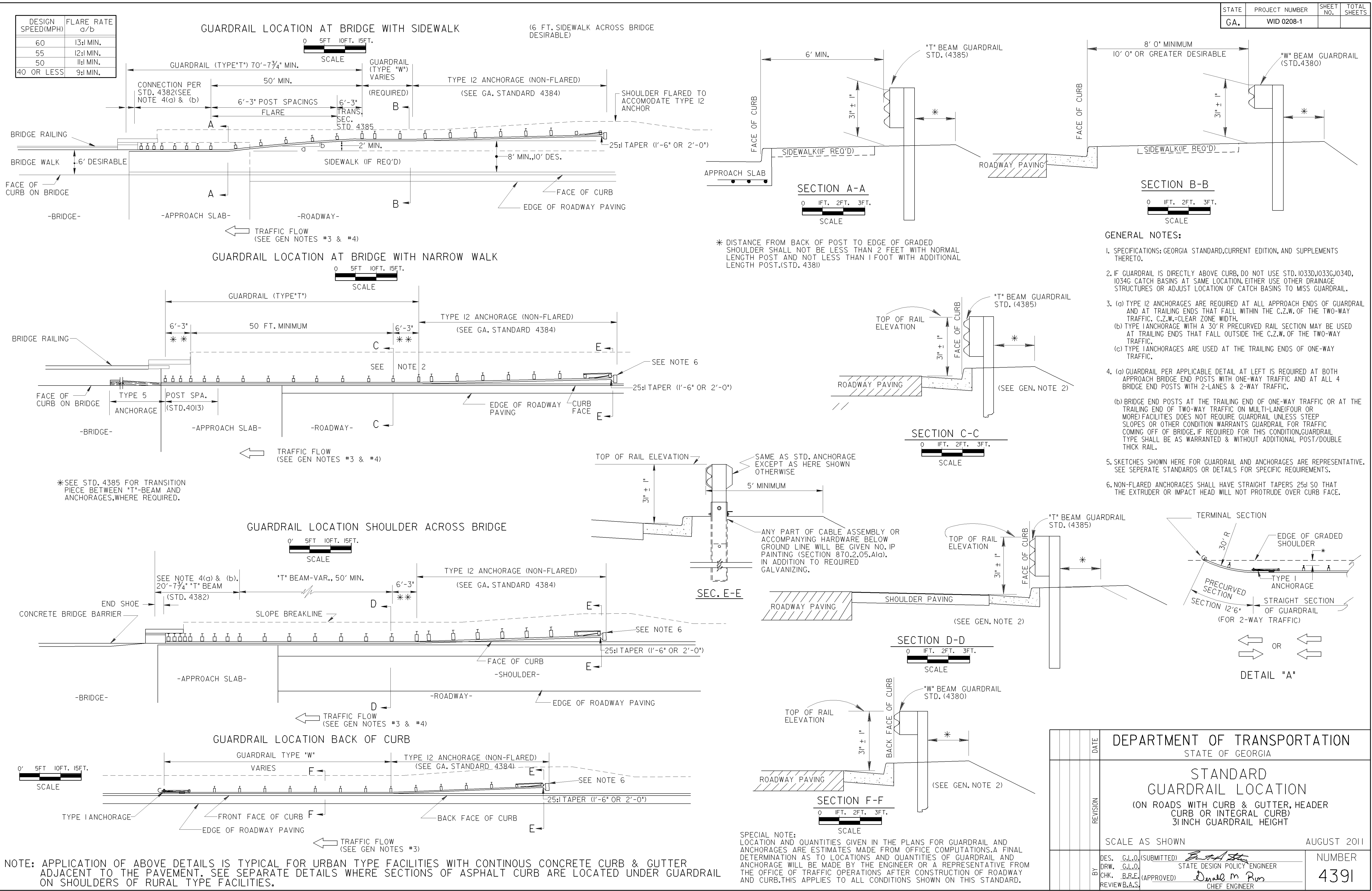
ELEVATION

(TYPICAL VIEW ALONG ROADWAY)

GENERAL NOTES:

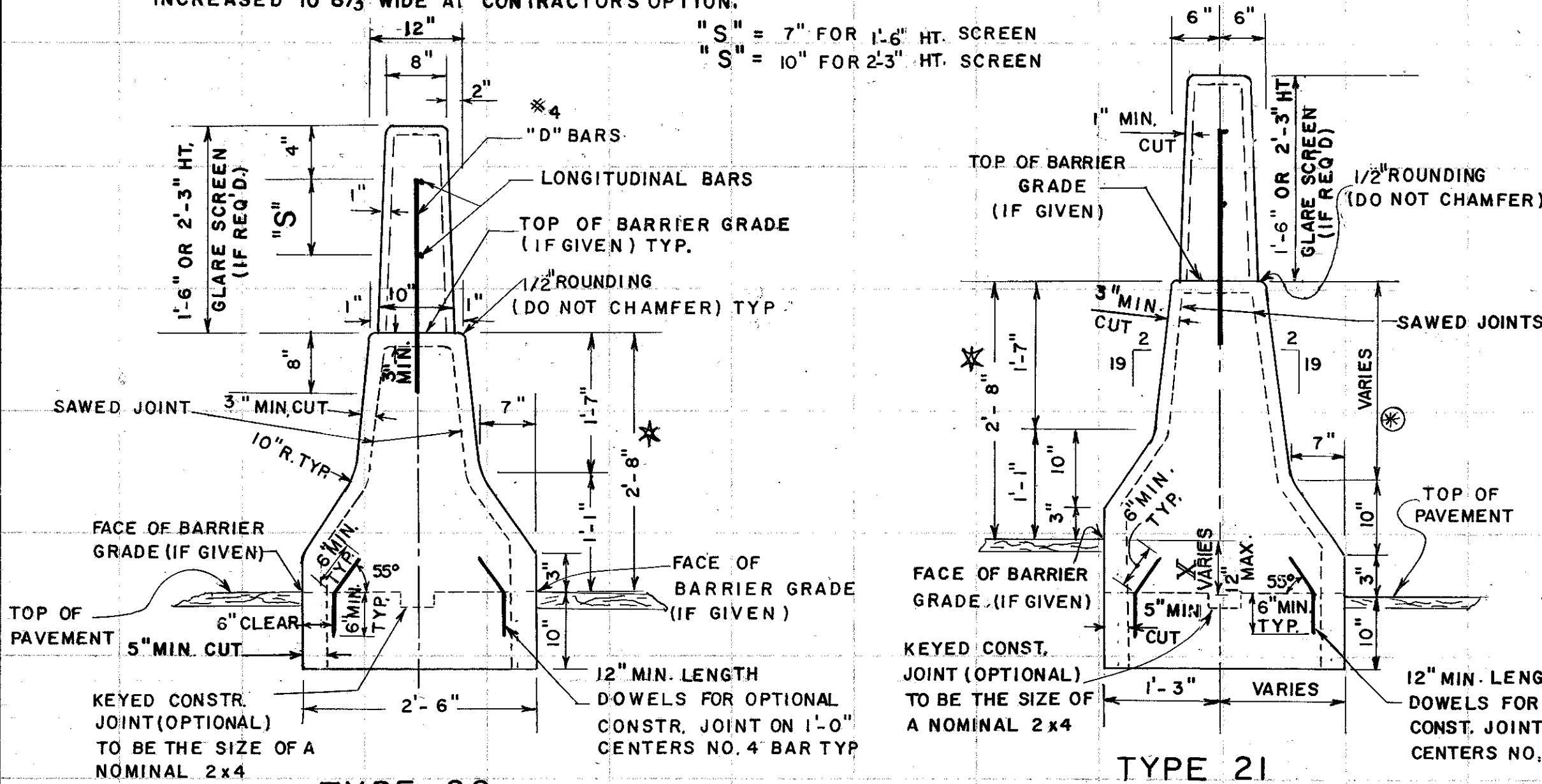
1. SPECIFICATIONS: GEORGIA STANDARD CURRENT EDITION, AND SUPPLEMENTS THERETO.
2. NUTS, BOLTS, WASHERS, RAIL, TERMINAL SECTIONS, END SHOES, BACK-UP PLATES, END SECTIONS AND OTHER GUARDRAIL HARDWARE ARE IN ACCORDANCE WITH THE CURRENT ARTBA TECHNICAL BULLETIN NO. 268 -- UNLESS SPECIFIED OTHERWISE, DIMENSIONS FOR POSTS AND OFFSET BLOCKS WILL BE ACCORDING TO GA. STANDARD 4011A.
3. FOR DETAILS OF GUARDRAIL ANCHORAGES, SEE APPLICABLE STANDARDS AND/OR CONSTRUCTION DETAILS.
4. FOR LOCATION OF GUARDRAIL SEE APPLICABLE LOCATION STANDARDS.
5. ALL STEEL HARDWARE COMPONENTS WILL BE GALVANIZED AFTER FABRI-CATION, GALVANIZING REPAIR COMPOUND (SEC. 645) WILL BE FIELD APPLIED TO ANY COATINGS DAMAGED.
6. WHEN GUARDRAIL IS REQUIRED ON CURVES WITH RADII LESS THAN 150', PRECURVED RAIL WILL BE REQUIRED.
7. PAYMENT FOR GUARDRAIL (Type "W") TO INCLUDE OFFSET BLOCKS, POST, BACK-UP PLATES WHERE REQUIRED, BOLTS, NUTS, WASHERS, TERMINAL SEC-TIONS, ADDITIONAL POST WHERE REQUIRED, & REMOVAL AND REPLACE-MENT OF PORTIONS OF MEDIAN PAVING, SPILLWAYS, OR CATCH BASINS WHERE NECESSARY.
8. ALL DIMENSIONS ARE SUBJECT TO MANUFACTURING TOLERANCES.
9. STANDARD NET LENGTH OF RAIL ELEMENTS MAY BE EITHER 12'-6" OR 25'-0". THESE LENGTHS SHALL BE ARRANGED TO PROVIDE AS NEARLY AS POSSIBLE THE REQUIRED LENGTH FOR EACH INSTALLATION.

		DATE	DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA	
		REVISION	STANDARD "W" BEAM GUARDRAIL TRANSITION 27 INCH GUARDRAIL TO 31 INCH GUARDRAIL HEIGHT	
			NO SCALE	AUGUST 2011
BY	DES.	G.L.O. (SUBMITTED)	STATE DESIGN POLICY ENGINEER <i>Donald M. Rios</i> CHIEF ENGINEER	
	DRW.	G.L.O.		
CHK.	B.R.E.	(APPROVED)	NUMBER 4390	
	REVIEW	B.A.S.		



STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	WID 0208-1		

NOTE: GLARE SCREEN WILL BE REQUIRED ONLY WHERE SPECIFIED. DETAILS SHOWN ON TYPE 20 BARRIER IS TYPICAL FOR ALL CONCRETE GLARE SCREENS. BOTTOM LONGITUDINAL BAR MAY BE OMITTED IF SCREEN IS NOT SLIP FORMED. JOINTS IN THE GLARE SCREEN SHALL MATCH THOSE IN THE BARRIER. TRANSITION FROM ONE SCREEN HEIGHT TO ANOTHER SHALL BE FROM ONE JOINT TO THE NEXT OR AS DIRECTED BY THE ENGINEER AND SHALL BE MEASURED FOR PAYMENT AS 2'-3" HEIGHT GLARE SCREEN, TOP OF 1'-6" HT. SCREEN MAY BE INCREASED TO 8 1/2" WIDE AT CONTRACTOR'S OPTION.

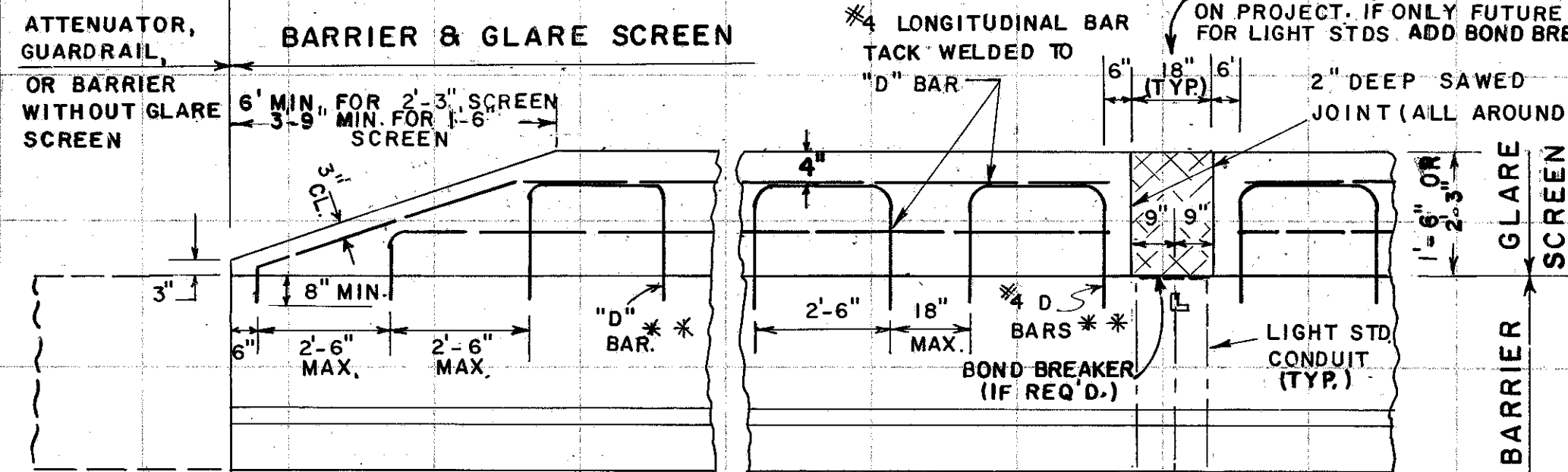


TYPE 20
(NORMAL SECTION, X=0)

TYPE 21
(SUPERELEVATED SECTION OR INDEPENDENT GRADES, X=0'-0" TO 1'-0" MAX.)

TYPE 22
(SUPERELEVATED SECTION OR INDEPENDENT GRADES, X=1'-0" TO 5'-0" MAX.)

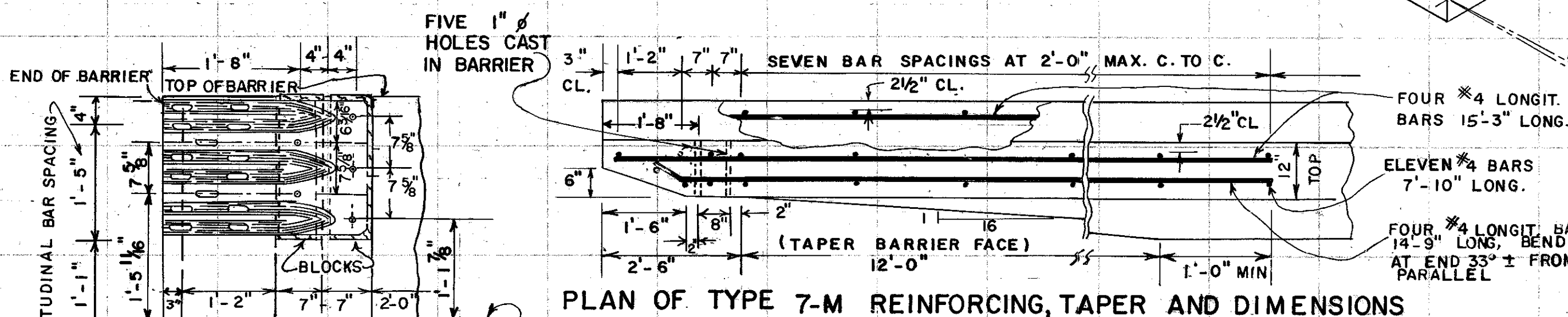
**ALTERNATE: INSTEAD OF "D" BARS, 4 STRAIGHT DOWEL BARS SPACED AT 24" O.C. MAY BE USED. LENGTH OF DOWELS SHALL BE 4" GREATER THAN HEIGHT OF GLARE SCREEN.



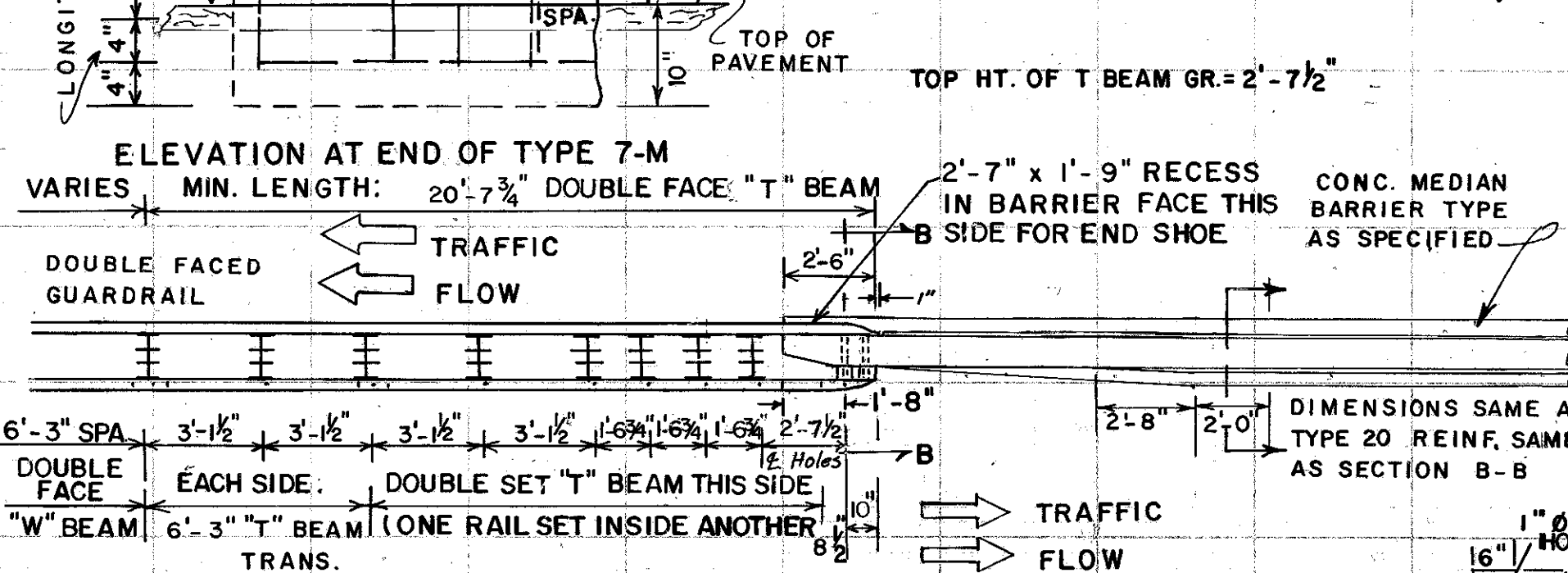
GLARE SCREEN TAPER

"D" BAR SPACING

NOTE: TAPER SHOWN ABOVE IS FOR USE ONLY WHERE SCREEN IS TERMINATED. DO NOT USE TAPER WHERE SCREEN IS INTERCEPTED BY PIER OR OTHER OBSTACLE. SEE SEPARATE PLANS FOR GLARE SCREEN AT PIERS OR WHERE BARRIER TOP WIDENS.

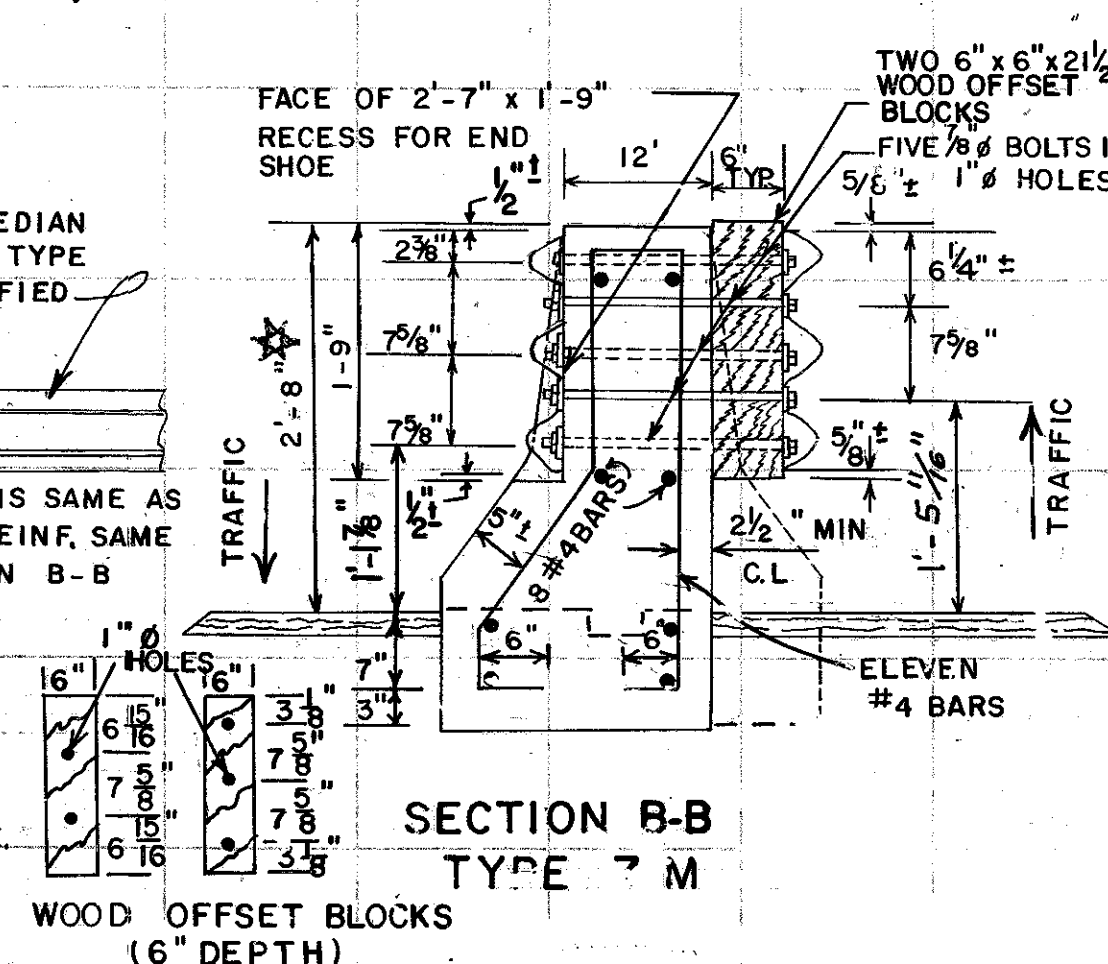


PLAN OF TYPE 7-M REINFORCING, TAPER AND DIMENSIONS



NOTE: TYPE 7-M BARRIER IS TO BE USED ONLY WHERE DOUBLE FACED GUARDRAIL IS WARRANTED AND FUTURE EXTENSION OF THE CONCRETE BARRIER IS NOT ANTICIPATED. PAYMENT FOR GUARDRAIL INCLUDES ADDITIONAL POSTS, END SHOES & CONNECTING HARDWARE & DOUBLE INSET RAIL.

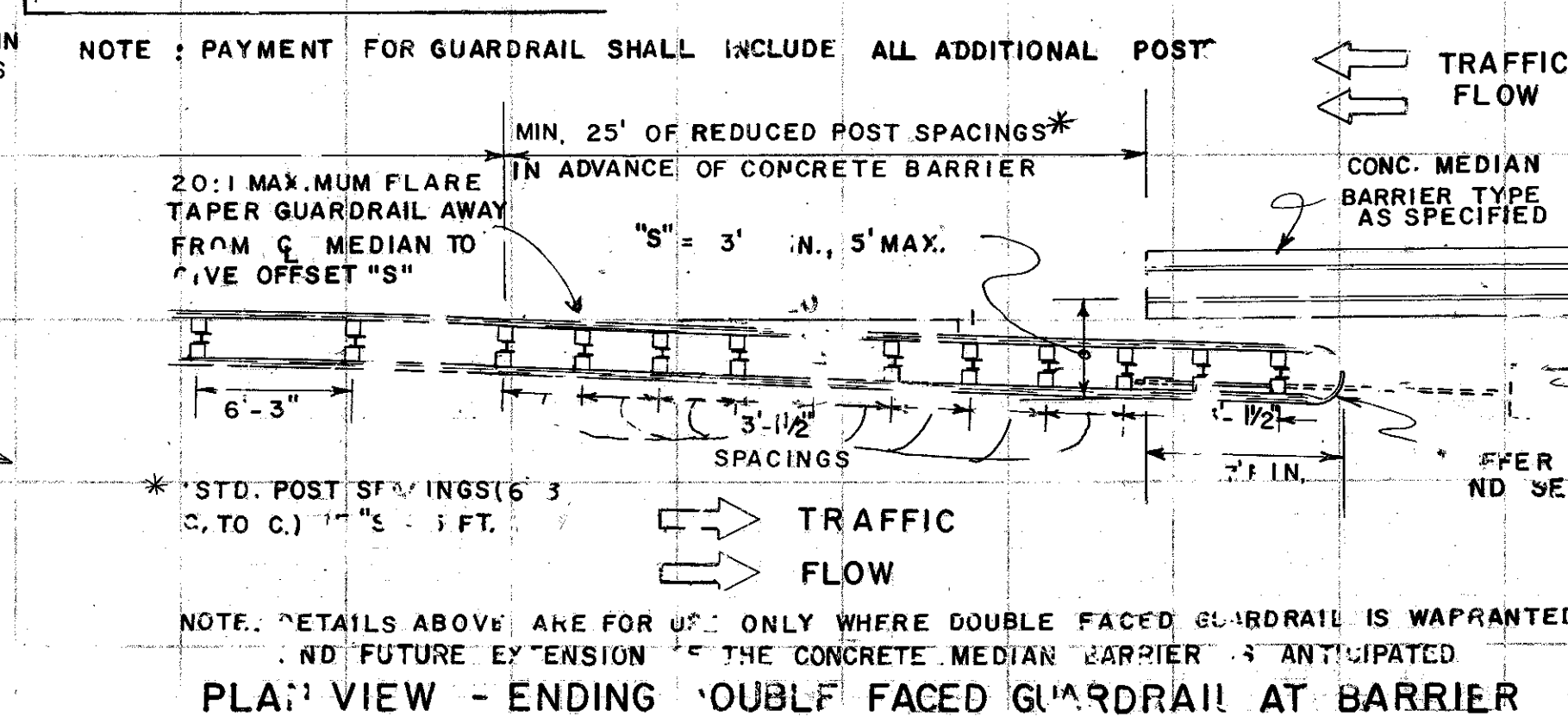
PLAN VIEW - TYPE 7-M TO GUARDRAIL CONNECTION



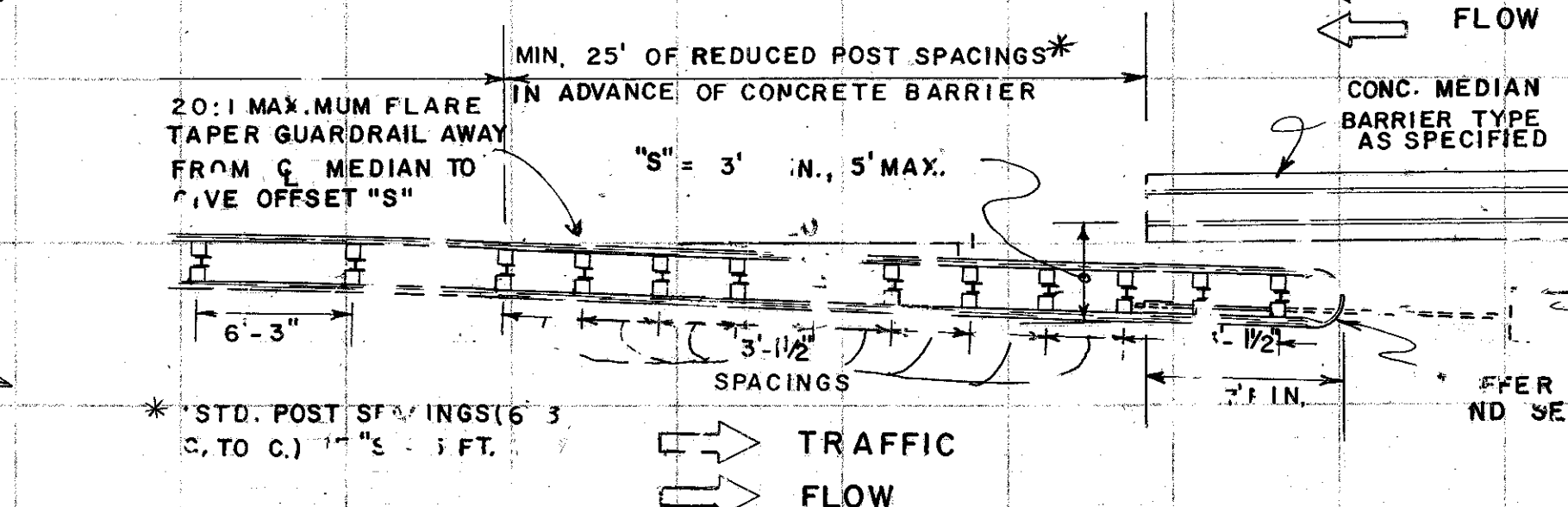
SECTION B-B
TYPE 7-M

TRANSITION SECTION

LIGHT STANDARD MARKING



NOTE: PAYMENT FOR GUARDRAIL SHALL INCLUDE ALL ADDITIONAL POSTS



NOTE: DETAILS ABOVE ARE FOR USE ONLY WHERE DOUBLE FACED GUARDRAIL IS WARRANTED AND FUTURE EXTENSION OF THE CONCRETE BARRIER IS NOT ANTICIPATED.

PLAN VIEW - ENDING DOUBLE FACED GUARDRAIL AT BARRIER

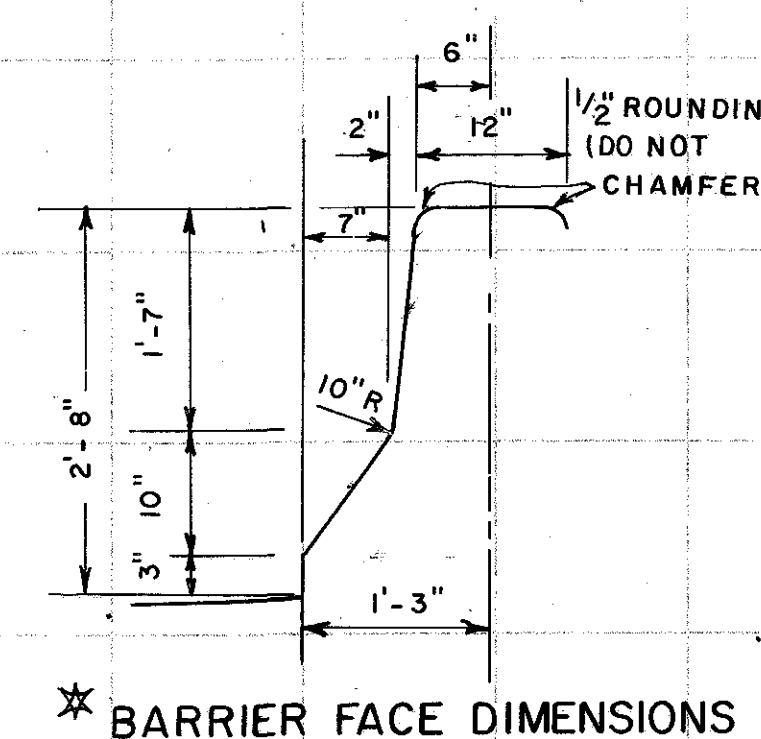
ALTERNATE: WIRE FABRIC REINFORCING MAY BE USED INSTEAD OF SPECIFIED REBARS IF DETAILS ARE SUBMITTED TO & APPROVED BY THE GA. D.O.T. PRIOR TO USE.

TYPICAL LONGITUDINAL BAR SPACING TO BE NO MORE THAN 12" O.C.

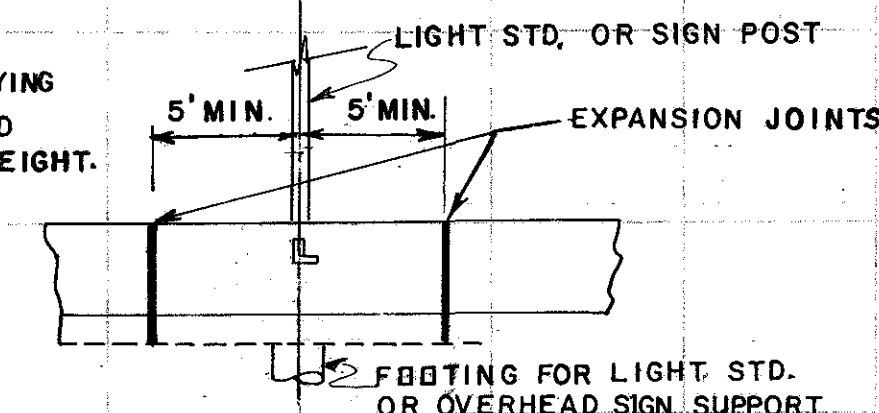
NOTE: VARY NUMBER OF LONGITUDINAL BARS SUCH THAT VERTICAL SPACING DOES NOT EXCEED 12" EACH FACE.

NOTE: IF WELDING OPTION IS SELECTED THE BAR SIZE SHALL BE INCREASED ONE BAR SIZE.

OPTIONAL WELDED BAR REINFORCEMENT SPLICE
NOTE: UNDERCUTTING OF BARS DUE TO WELDING SHALL BE BASIS FOR REJECTION



BARRIER FACE DIMENSIONS



JOINT SPACING RIGID FOOTING LOCATIONS

NOTE: ADJUST EXPANSION JOINT SPACING SUCH THAT NEAREST JOINT IS 5 FT. FROM C. OF POSTS. (SEE GEN. NOTE NO. 4. A. 4.)

GENERAL NOTES:

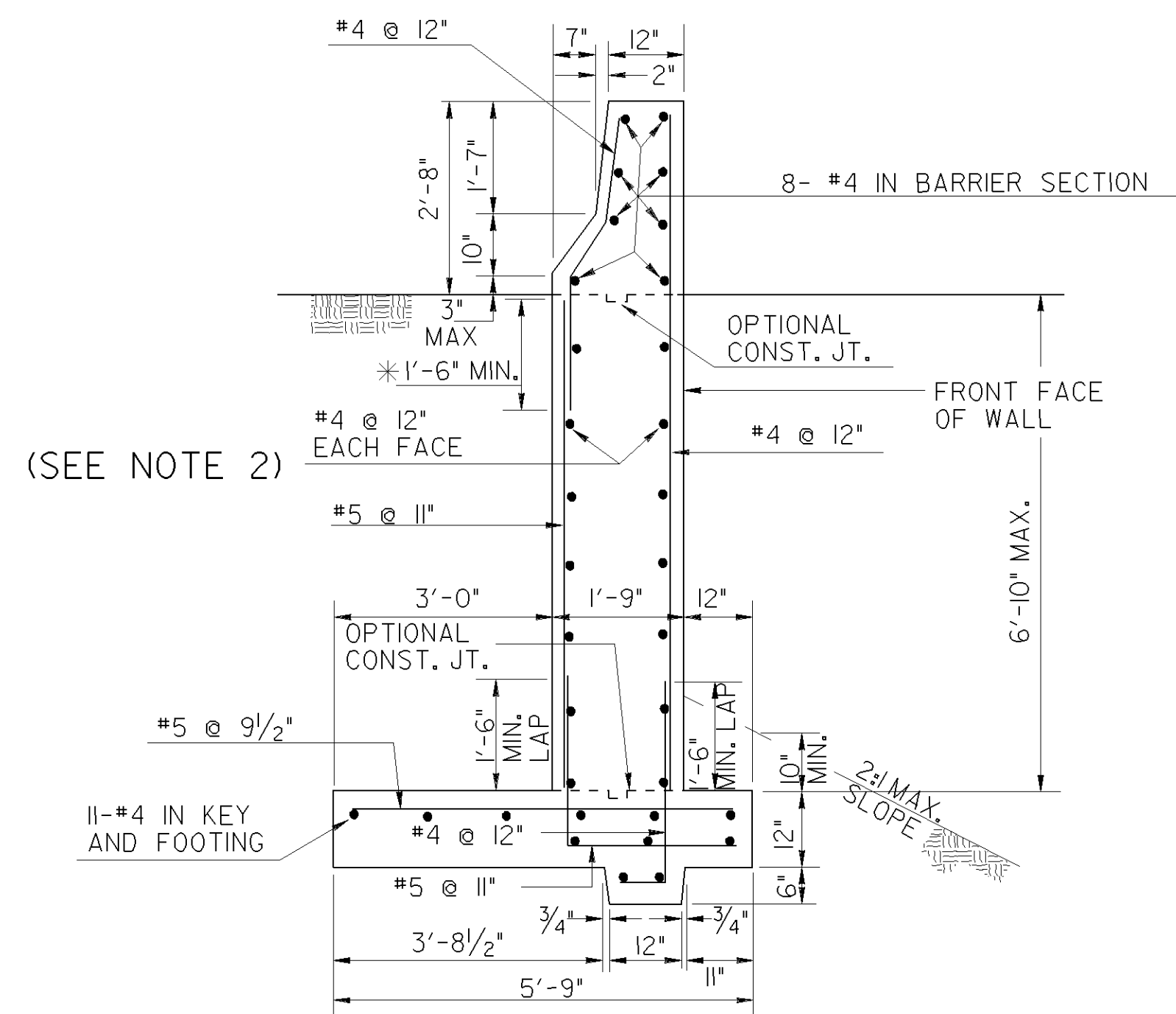
- SPECIFICATIONS: GEORGIA STANDARD CURRENT EDITION, AND SUPPLEMENTS THERETO.
- ALL CONCRETE SHALL BE CLASS "A". SURFACE FINISHES REQUIRED ONLY WHERE SPECIFIED. SEE SECTION 500.
- CONSTRUCTION TOLERANCE - THE TOP SURFACE SHALL BE CHECKED FOR GRADE AND ALIGNMENT AND ANY VARIATION FROM THE ESTABLISHED LINE AND GRADE, GREATER THAN 1/8" IN 10'-0", WHEN CHECKED WITH A STRAIGHT EDGE OF NOT LESS THAN 10'-0" IN LENGTH, SHALL BE REMOVED AND RESET AS DIRECTED BY THE ENGINEER.
- CONSTRUCTION METHOD -
A. CAST-IN-PLACE (RIGID FORMS)
1. THE MEDIAN BARRIER SHALL HAVE A BASE OF GRADED AGGREGATE, COMPACTED TO 100 PERCENT OF THE MAXIMUM LABORATORY DRY DENSITY, PLACED ON A SUB-GRADE CONSTRUCTED BY NORMAL HIGHWAY PROCEDURES AND CRITERIA. SEE TYPICAL SECTION.
2. FORMS SHALL BE SO CONSTRUCTED AND ANCHORED AS NOT TO "FLOAT UP" OR BE DIS-PLACED DURING CONSTRUCTION AND THE LINE AND GRADE ESTABLISHED SHALL BE MET WITHIN TOLERANCES SPECIFIED.
3. EXPANSION JOINTS ARE REQUIRED IN ALL BARRIER TYPES AT A MAXIMUM SPACING OF 400 FEET. A 1" PREFORMED JOINT FILLER SHALL BE USED AT THE EXPANSION JOINTS. CONTRACTION JOINTS SHALL BE PLACED AT EVERY 20'. CONTRACTION JOINTS MAY BE SAWED, IF SAWED JOINTS ARE USED, THEY SHALL BE 1/4" WIDE AND TO THE DEPTH SHOWN IN THE DETAILS.
4. NO JOINT SHALL BE CLOSER TO A LIGHT STANDARD OR SIGN POST THAN 5'. JOINTS SHALL BE EQUALLY SPACED ABOUT THE LIGHT STANDARD OR SIGN POST CENTERLINE. ADJUST ADJACENT JOINTS TO A BALANCED SPACING FOR A PLEASING APPEARANCE. AN EXPANSION JOINT IS REQUIRED 5' ± EACH SIDE OF EACH LIGHT STANDARD.
5. CAST IN PLACE MEDIAN BARRIER MAY BE CONSTRUCTED IN MORE THAN ONE POUR. THIS METHOD WILL REQUIRE KEYED CONSTRUCTION JOINTS AS SHOWN. OTHER CON-STRUCTION JOINTS MAY BE APPROVED BY THE ENGINEER.
B. CAST-IN-PLACE (SLIP FORM):
1. NOTES 4A.1, 4A.3, 4A.4, AND 4A.5 SHALL APPLY TO THE SLIP FORM METHOD OF CONSTRUCTION.
5. REINFORCEMENT STEEL, WHERE REQUIRED
A. BARRIER: ALL LONGITUDINAL STEEL SHALL BE CONTINUOUS EXCEPT: REQUIRED STOPS AT EXPANSION JOINTS; AND OPTIONAL STOPS NOT CLOSER THAN 100 FT. AT SELECTED CONTRA JTS.
B. GLARE SCREEN: ALL LONGITUDINAL REINFORCING STEEL TO BE NO. 4 BARS CONTINUOUS THROUGHOUT THE FULL LENGTH OF THE GLARE SCREEN, EXCEPT ACROSS EXPAN SION JOINTS, THROUGH LIGHT STANDARDS AND SIGN POSTS.
C. LONGITUDINAL OR VERT. REINF. MAY BE LAP SPLICED 1'-6" AS APPROVED BY THE ENGINEER.
6. ALL GLARE SCREENS REQUIRE #4 VERTICAL BARS FIRMLY BONDED INTO BARRIER TOP. V. BARS MAY BE "D" BARS AT 18" MAX. SPACINGS OR STRAIGHT DOWELS AT 24" MAX. SPACINGS. VERTICAL BARS WILL BE EQUALLY SPACED BETWEEN JOINTS. DRILLING IS REQUIRED IN EXIST. BARRIERS.
7. TYPE 21 BARRIER SHALL BE USED WHERE TRANSITIONING FROM A TYPE 20 TO A TYPE 22. FOR SUCH A TRANSITION THE TYPE 21 BARRIER FACE INDICATED BY (X) WILL BE CONSTRUCTED AS SHOWN FOR THE TYPE 22 TO PROVIDE A CONSTANT BASE WIDTH OF 2'-6".
8. IF OVERHEAD SIGN SUPPORTS ARE TO BE PLACED ON TOP OF THE BARRIER, THE FOOTING SHALL BE INCORPORATED AS AN INTEGRAL PART OF THE BARRIER. THE DESIGN OF THE SIGN SUPPORT FOOTING SHALL BE DESIGNED BY THE CONTRACTOR & APPROVED BY THE DEPT. OF TRANSPORTATION PRIOR TO THE START OF CONSTRUCTION. SEE SEPARATE PLAN DETAILS FOR TYPE 26 CONCRETE BARRIER WHERE REQUIRED.
- IF LIGHT STANDARDS ARE TO BE PLACED ON TOP OF THE MEDIAN BARRIER, THEIR FOOTING SHALL BE INCORPORATED AS AN INTEGRAL PART OF THE BARRIER. SEE THE APPROPRI-ATE CONSTRUCTION DETAIL SHEETS FOR ADDITIONAL INFORMATION. THE COST OF THE FOOT-ING AND OTHER NECESSARY MATERIALS TO BUILD THE FOOTING UP TO THE TOP OF THE BARRIER SHALL BE INCLUDED IN THE OVERALL BID FOR THE MEDIAN BARRIER.
- SEE SEPARATE PLANS FOR LIGHT STANDARDS OR OVERHEAD SIGNS (IF APPLICABLE).
- CENTERLINE STATIONS SHALL BE CAST INTO THE SLOPING FACE ON BOTH SIDES, OF THE BARRIER 8" ABOVE THE PAVEMENT SURFACE IN ACCORDANCE WITH GA. STD. 9031-H. EACH SIDE OF CONCRETE BARRIER AT CENTER OF LIGHT STANDARD SHALL BE MARKED WITH THE LETTER "L" AS SHOWN 12" FROM BARRIER TOP.
- CONC. GLARE SCREEN SHALL BE PLACED ON BARRIER AS SPECIFIED ON THE P. ANS. COST OF GLARE SHALL BE PAID FOR AS "CONC. GLARE SCREEN" - (HEIGHT) - LIN. FT.

BARRIER TYPE	DIMENSION X	BASIS OF PAYMENT
20	0'-0"	CONCRETE BARRIER, TYPE 20 - LIN. FT.
21	0'-0" TO 1'-0"	CONCRETE BARRIER, TYPE 21 - LIN. FT.
22	1'-0" TO 5'-0"	CONCRETE BARRIER, TYPE 22 - LIN. FT.
7-M	0'-0"	CONCRETE BARRIER TYPE 7-M - LIN. FT.

DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA STANDARD TYPES 20, 21, 22 AND 7-M CONCRETE BARRIER - PERMANENT AND CONCRETE GLARE SCREEN

REV.	DATE	BY	REVISIONS
1	11-1-83	W.S.	W.S. (SUBMITTED)
2	11-1-83	W.S.	W.S. (SUBMITTED)
3	11-1-83	W.S.	W.S. (SUBMITTED)
4	11-1-83	W.S.	W.S. (SUBMITTED)
5	11-1-83	W.S.	W.S. (SUBMITTED)
6	11-1-83	W.S.	W.S. (SUBMITTED)
7	11-1-83	W.S.	W.S. (SUBMITTED)
8	11-1-83	W.S.	W.S. (SUBMITTED)
9	11-1-83	W.S.	W.S. (SUBMITTED)
10	11-1-83	W.S.	W.S. (SUBMITTED)
11	11-1-83	W.S.	W.S. (SUBMITTED)
12	11-1-83	W.S.	W.S. (SUBMITTED)
13	11-1-83	W.S.	W.S. (SUBMITTED)
14	11-1-83	W.S.	W.S. (SUBMITTED)
15	11-1-83	W.S.	W.S. (SUBMITTED)
16	11-1-83	W.S.	W.S. (SUBMITTED)
17	11-1-83	W.S.	W.S. (SUBMITTED)
18	11-1-83	W.S.	W.S. (SUBMITTED)
19	11-1-83	W.S.	W.S. (SUBMITTED)
20	11-1-83	W.S.	W.S. (SUBMITTED)
21	11-1-83	W.S.	W.S. (SUBMITTED)
22	11-1-83	W.S.	W.S. (SUBMITTED)
23	11-1-83	W.S.	W.S. (SUBMITTED)
24	11-1-83	W.S.	W.S. (SUBMITTED)
25	11-1-83	W.S.	W.S. (SUBMITTED)
26	11-1-83	W.S.	W.S. (SUBMITTED)
27	11-1-83	W.S.	W.S. (SUBMITTED)
28	11-1-83	W.S.	W.S. (SUBMITTED)
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31	11-1-83	W.S.	W.S. (SUBMITTED)
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40	11-1-83	W.S.	W.S. (SUBMITTED)
41	11-1-83	W.S.	W.S. (SUBMITTED)
42	11-1-83	W.S.	W.S. (SUBMITTED)
43	11-1-83	W.S.	W.S. (SUBMITTED)
44	11-1-83	W.S.	W.S. (SUBMITTED)
45	11-1-83	W.S.	W.S. (SUBMITTED)
46	11-1-83	W.S.	W.S. (SUBMITTED)
47	11-1-83	W.S.	W.S. (SUBMITTED)
48	11-1-83	W.S.	W.S. (SUBMITTED)
49	11-1-83	W.S.	W.S. (SUBMITTED)
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54	11-1-83	W.S.	W.S. (SUBMITTED)
55	11-1-83	W.S.	W.S. (SUBMITTED)
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95	11-1-83	W.S.	W.S. (SUBMITTED)
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100	11-1-83	W.S.	W.S. (SUBMITTED)

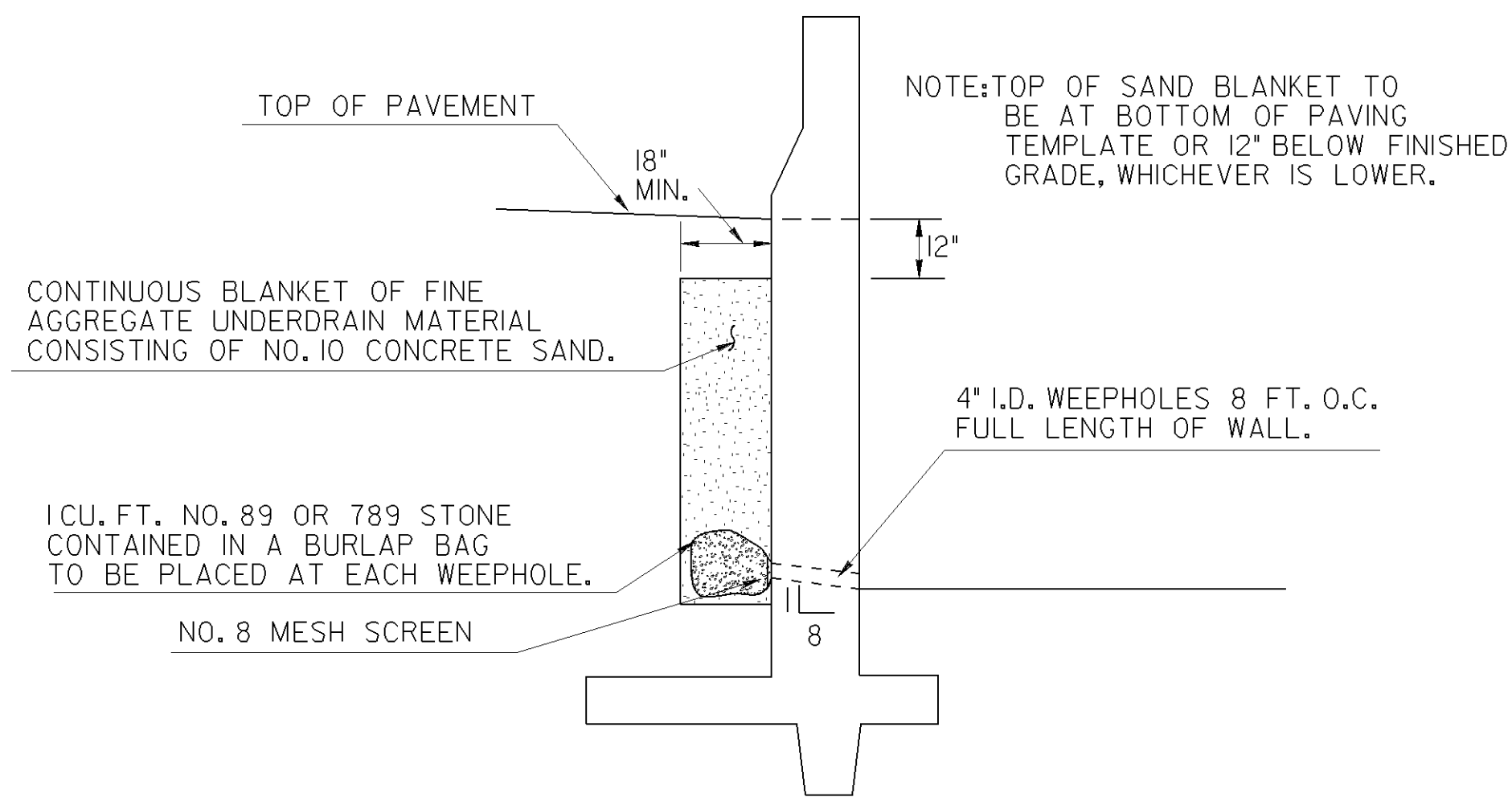
NO.	SCALE	DATE	BY	REVISIONS
1	NO SCALE	11-1-83	W.S.	W.S. (SUBMITTED)
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4	NO SCALE	11-1-83	W.S.	W.S. (SUBMITTED)
5	NO SCALE	11-1-83	W.S.	W.S. (SUBMITTED)
6	NO SCALE	11-1-83	W.S.	W.S. (SUBMITTED)
7	NO SCALE	11-1-83	W.S.	W.S. (SUBMITTED)
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11	NO SCALE	11-1-83	W.S.	W.S. (SUBMITTED)
12	NO SCALE	11-1-83	W.S.	W.S. (SUBMITTED)
13	NO SCALE	11-1-83	W.S.	W.S. (SUBMITTED)
14	NO SCALE	11-1-83	W.S.	W.S. (SUBMITTED)
15	NO SCALE	11-1-83	W.S.	W.S. (SUBMITTED)
16	NO SCALE	11-1-83	W.S.	W.S. (SUBMITTED)
17	NO SCALE	11-1-83	W.S.	W.S. (SUBMITTED)
18	NO SCALE	11-1-83	W.S.	W.S. (SUBMITTED)
19	NO SCALE	11-1-83	W.S.	W.S. (SUBMITTED)
20	NO SCALE	11-1-83	W.S.	W.S. (SUBMITTED)
21	NO SCALE	11-1-83	W.S.	W.S. (SUBMITTED)
22	NO SCALE	11-1-83	W.S.	W.S. (SUBMITTED)
23	NO SCALE	11-1-83	W.S.	W.S. (SUBMITTED)
24	NO SCALE	11-1-83	W.S.	W.S. (SUBMITTED)
25	NO SCALE	11-1-83	W.S.	W.S. (SUBMITTED)
26	NO SCALE	11-1-83	W.S.	W.S. (SUBMITTED)
27	NO SCALE	11-1-83	W.S.	W.S. (SUBMITTED)
28	NO SCALE	11-1-83	W.S.	W.S. (SUBMITTED)
29	NO SCALE	11-1-83	W.S.	W.S. (SUBMITTED)
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32	NO SCALE	11-1-83	W.S.	W.S. (SUBMITTED)
33	NO SCALE	11-1-83	W.S.	W.S. (SUBMITTED)
34	NO SCALE	11-1-83	W.S.	W.S. (SUBMITTED)
35	NO SCALE	11-1-83	W.S.	W.S. (SUBMITTED)
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76	NO SCALE	11-1-83	W.S.	W.S. (SUBMITTED)



*NON-CONTACT LAPS ARE ACCEPTABLE

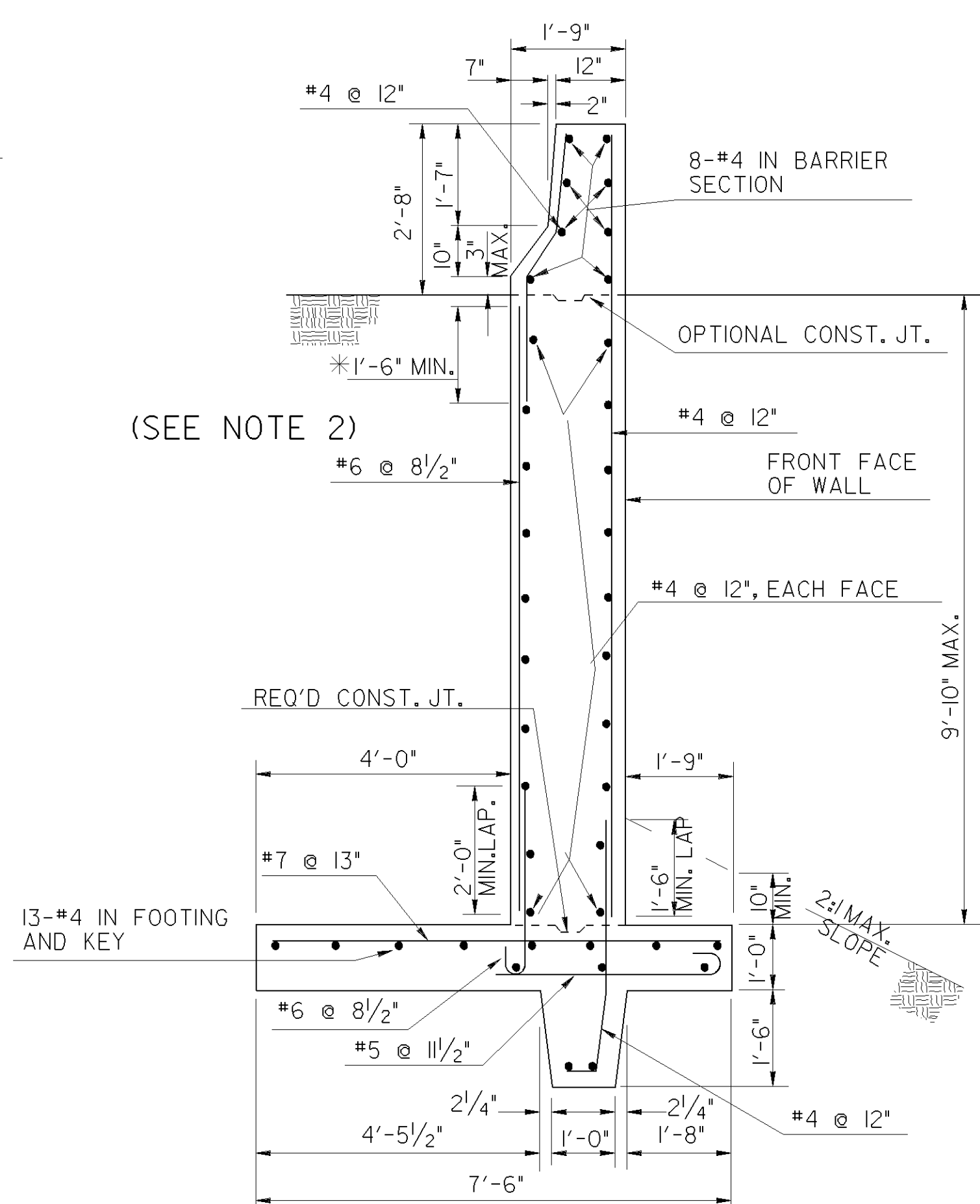
TYPE 2-A SIDE BARRIER

RED'D SOIL BEARING CAPACITY	
TYPE	CAPACITY, TONS/SF
2-A	1.25
2-B	1.25
2-C	1.5
2	1.0

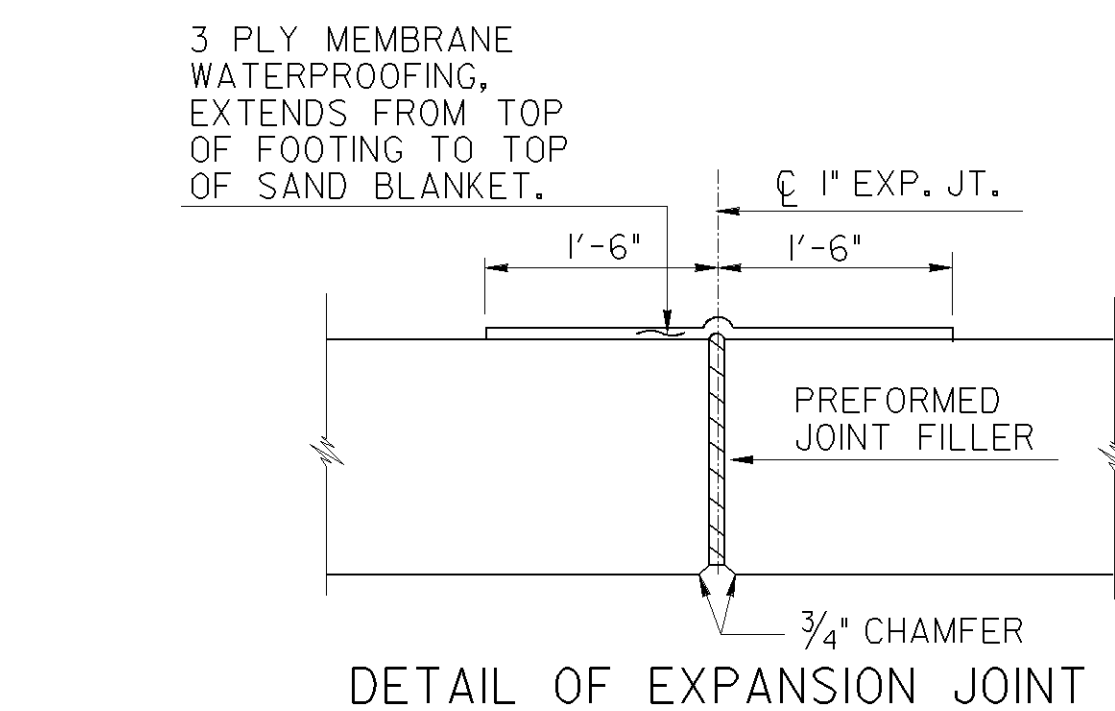


SEE GEN. NOTE 9
FOR ALTERNATE

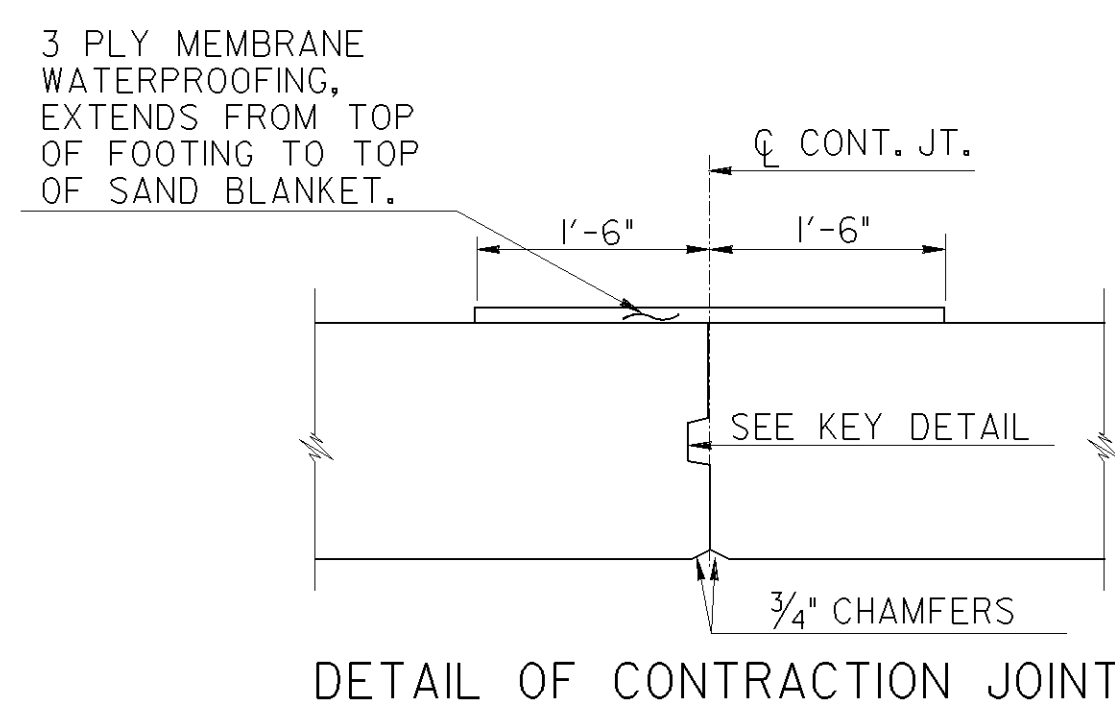
UNDERDRAIN DETAILS



TYPE 2-B SIDE BARRIER

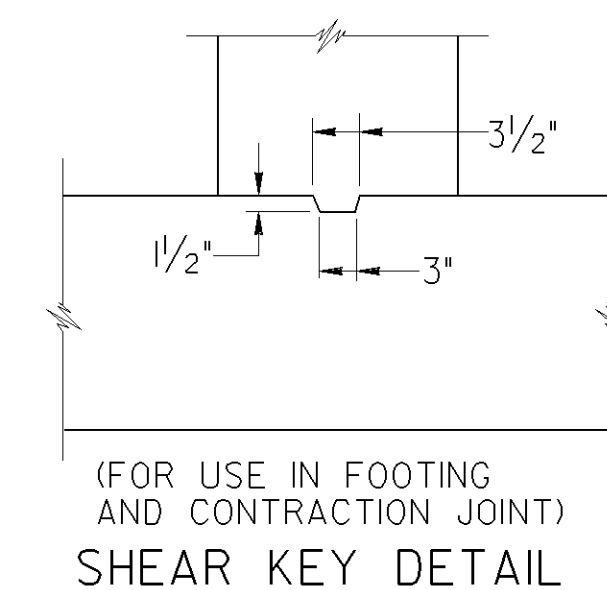


DETAIL OF EXPANSION JOINT

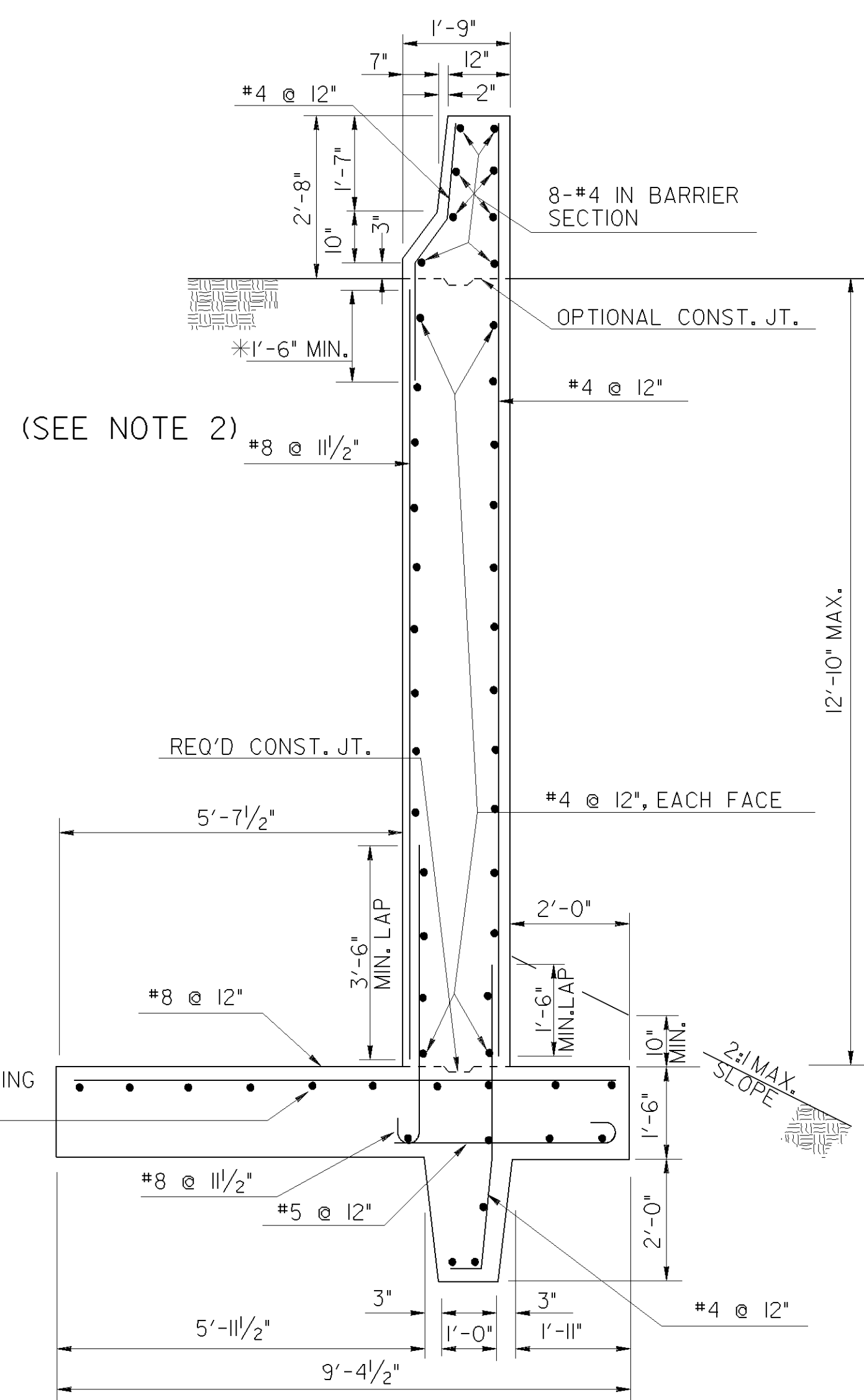


DETAIL OF CONTRACTION JOINT

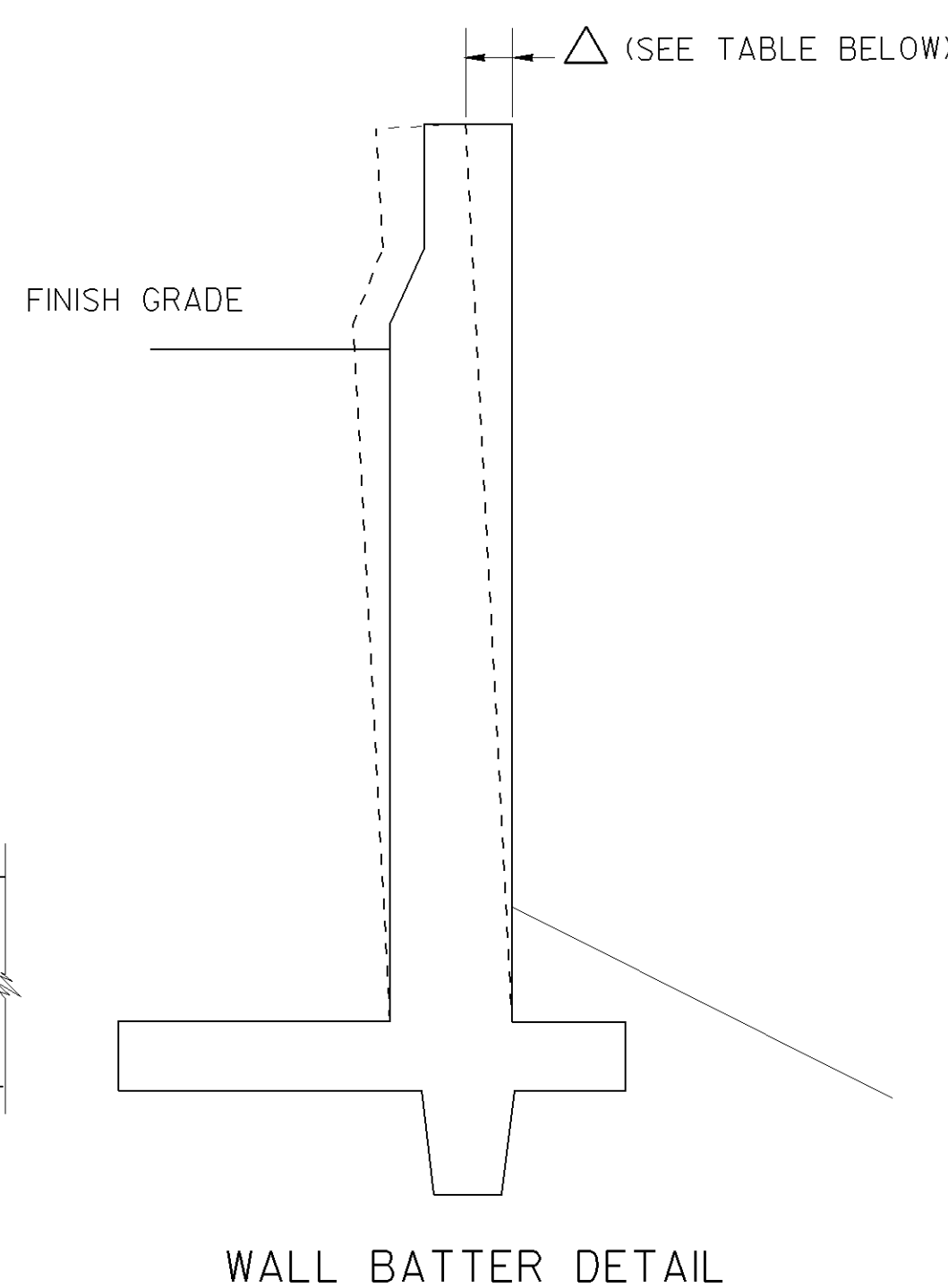
Δ (INCHES)	
WALL TYPE	DIMENSION
2-A	0
2-B	0
2-C	3/16



SHEAR KEY DETAIL

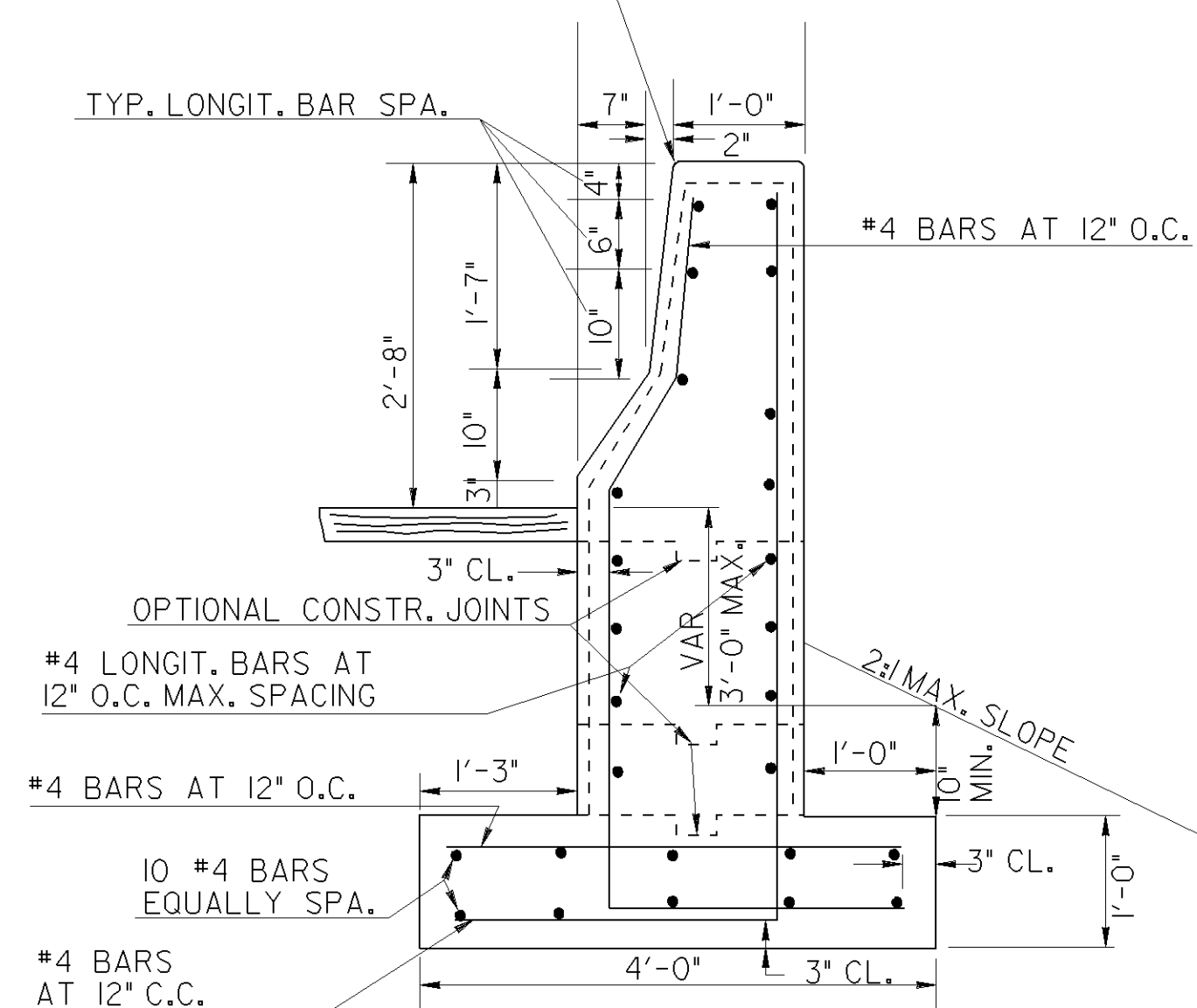


TYPE 2-C SIDE BARRIER



WALL BATTER DETAIL

1/2" ROUNING (DO NOT CHAMFER)



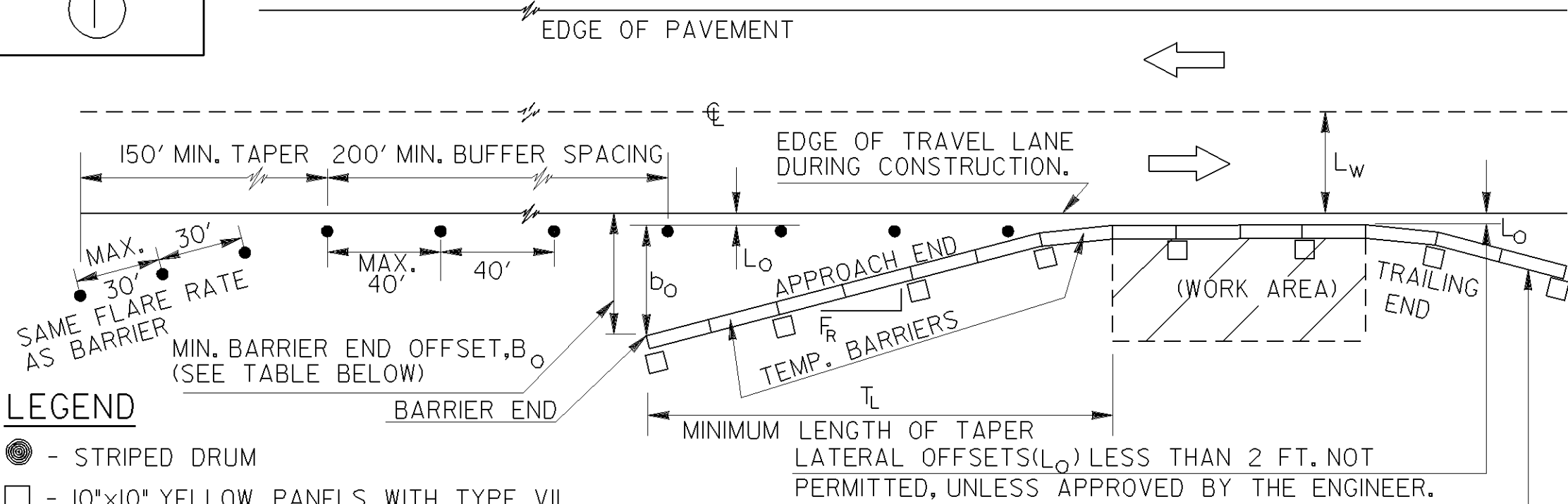
TYPE 2

- GENERAL NOTES:
- AT CONTRACTOR'S OPTION, SIDES OF FOOTING KEY MAY BE VERTICAL. MAINTAIN WIDTH SHOWN AT TOP OF KEY. BACKFILL FRONT FACE OF WALL FIRST.
 - UNDERDRAIN SYSTEM PER DETAILS AT BOTTOM LEFT AND/OR NOTE 9 IS REQUIRED FOR TYPES 2-A, 2-B, AND 2-C.
 - EXPOSED CONCRETE SURFACES SHALL RECEIVE A TYPE III FINISH.
 - 1" EXPANSION JOINTS SHALL BE PROVIDED IN WALL, FOOTING AND KEY AT A MAXIMUM SPACING OF 100 FT. EXPANSION JOINTS SHALL BE SPACED UNIFORMLY.
 - CONTRACTION JOINTS SHALL BE AS SPECIFIED FOR SIDE BARRIER, GA. STD. 4948A.
 - EXPANSION AND CONTRACTION JOINTS IN TYPES 2-A, 2-B, AND 2-C SIDE BARRIER SHALL BE WATERPROOFED ON THE BACK SIDE. WATERPROOFING SHALL BE 3-PLY AND EXTEND FROM TOP OF SAND BLANKET TO TOP OF FOOTING FOR 1'-6" MIN. EACH SIDE OF JOINT.
 - TYPES 2, 2-A, 2-B, AND 2-C SIDE BARRIER SHALL BE PAID FOR PER LIN. FT. AS CONCRETE SIDE BARRIER, TYPE 2, 2A, 2B, OR 2C PRICE BID TO INCLUDE COST OF WATERPROOFING AND ALL INCIDENTALS AS SPECIFIED IN SECTION 621 OF THE STD. SPEC.
 - SIDE BARRIER DESIGNED FOR THE FOLLOWING SOIL PROPERTIES:
 θ = ANGLE OF INTERNAL FRICTION 28°
 γ = UNIT WEIGHT = 110 PCF
 m = COEFF. OF SLIDING FRICTION = .45
 - A SYNTHETIC DRAINAGE BLANKET SELECTED FROM THE DEPARTMENT'S QUALIFIED PRODUCTS LIST IS AN ACCEPTABLE SUBSTITUTE FOR THE SAND BLANKET, BAG OF STONE, AND MESH SCREEN SHOWN IN THE UNDERDRAIN DETAILS.

DEPARTMENT OF TRANSPORTATION	
STATE OF GEORGIA	
STANDARD	
CONCRETE SIDE BARRIER	
TYPES 2, 2A, 2B & 2C	
NO SCALE	DEC., 1999
DES. (SUBMITTED) <i>B. A. A. S.</i>	NUMBER
DRW. STATE ROAD & AIRPORT DESIGN ENGINEER	4948B
TRA. (APPROVED) <i>O. S. S.</i>	
CHK. CHIEF ENGINEER	

OPTION
①

BARRIER DELINEATIONS, OFFSETS, & FLARE RATES



LEGEND

- - STRIPED DRUM
- - 10"x10" YELLOW PANELS WITH TYPE VII SHEETING- MAX. 40' SPACING-LONGITUDINAL SECTION-MAX. 20' SPACING IN TAPER
- TL - MINIMUM TAPER LENGTH OF TEMPORARY BARRIER MEASURED FROM THE SECTION OF TEMPORARY BARRIER RUNNING PARALLEL WITH THE TRAVEL LANE TO THE BARRIER END IN FEET
- Bo - MINIMUM BARRIER END OFFSET DISTANCE IN FEET
- Lo - DESIRABLE MINIMUM LATERAL OFFSET DISTANCE FROM THE EDGE OF THE TRAVEL LANE TO THE TOE OF THE TEMPORARY BARRIER IN FEET
- bo - MINIMUM BARRIER END OFFSET(Bo) MINUS THE DESIRABLE MINIMUM LATERAL OFFSET(Lo)
- FR - MINIMUM FLARE RATE OF THE TEMPORARY BARRIER IN THE TAPER SECTION
- Lw - LANE WIDTH IN FEET

FOR A TWO-LANE TWO-WAY ROADWAY THE LANE WIDTH(Lw) PLUS THE LATERAL OFFSET(Lo) MUST BE GREATER THAN THE MINIMUM BARRIER END OFFSET(Bo), OR THE TRAILING END SHALL BE TAPERED SAME AS APPROACH.

IF Lw + Lo IS LESS THAN 20 FT. FOR THE WORK AREA OR THE TRAILING END, THEN THE 10"x10" PANELS SHALL BE REFLECTORIZED ON BOTH SIDES.

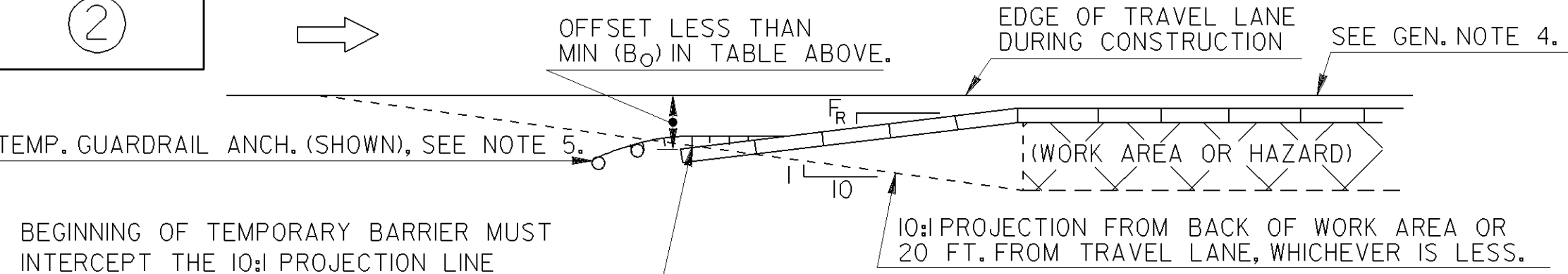
MINIMUM LENGTH OF TAPER REQUIRED			
$b_o = B_o - L_o$ $T_L = b_o \times F_R$			

POSTED SPEED ON THE ROADWAY	DESIRABLE MINIMUM LATERAL OFFSET (FT.) Lo	FLARE RATE FR	Bo MINIMUM OFFSET TO BARRIER END (FEET)
30-40 MPH	2	5:1	13
45-50 MPH	2	6:1	16
55 MPH	2	8:1	23
60-70 MPH	2	8:1	30

NOTE: INTERMEDIATE SPEEDS MAY UTILIZE AVERAGE VALUES.

OPTION
②

MINIMUM BARRIER ADVANCEMENT LENGTH
(WITH TEMPORARY GUARDRAIL ANCHOR)



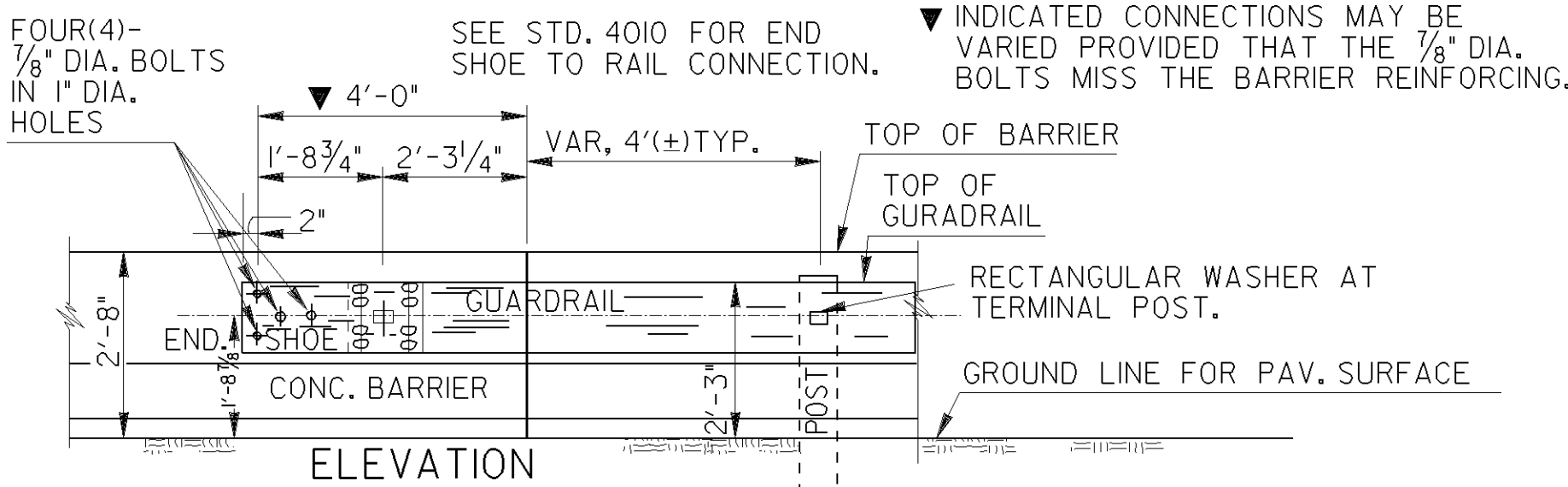
OPTION
⑤

TEMPORARY CONCRETE BARRIER/GUARDRAIL CONNECTIONS & JUNCTIONS

NOTE: PAYMENT FOR TEMPORARY CONCRETE BARRIER WILL INCLUDE ALL SPECIAL END SHOES, BOLTS, BOLT HOLES, NUTS, WASHERS, ADDITIONAL GUARDRAIL POSTS, ETC., NECESSARY FOR THE CONNECTIONS, AS SHOWN, WHEN REQUIRED.

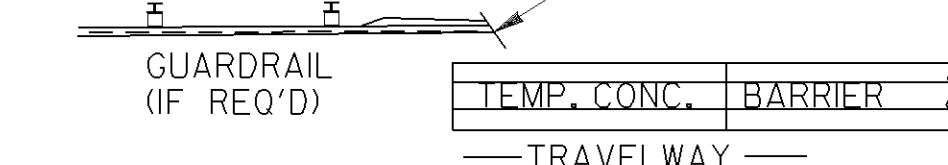
ALL SPECIAL END SHOES WILL BE CONNECTED TO CONCRETE BARRIER WITH FOUR 7/8" DIA. BOLTS (A.S.T.M. A-307). LOCATION OF THE BOLTS MAY BE VARIED AT THE DIRECTION OF THE ENGINEER. REMOVABLE TYPE 7/8" DIA. CONCRETE ANCHOR BOLTS, INSTALLED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS, MAY BE USED INSTEAD OF THE BOLTS CONNECTION SYSTEM SHOWN. ANY BOLTS BROKEN OR IMPROPERLY INSTALLED WILL BE CAUSE FOR REJECTION.

7/8" THREADED RODS WITH NUTS AND WASHERS MAY BE USED IN LIEU OF 7/8" BOLTS.



GUARDRAIL REQ'D, ON TRAILING END ONLY, WHERE CONDITION WARRANTS.

GUARDRAIL ANCHORAGE REQUIRED (SEE GENERAL NOTE 7).



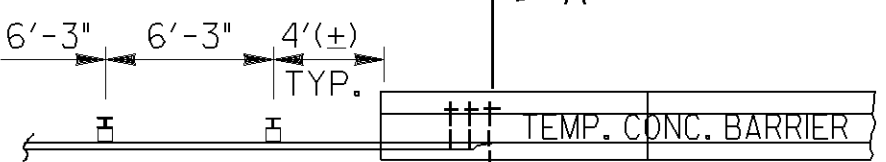
PLAN

ONE-WAY TRAFFIC TRAILING END

PLAN

ONE-WAY TRAFFIC APPROACH END

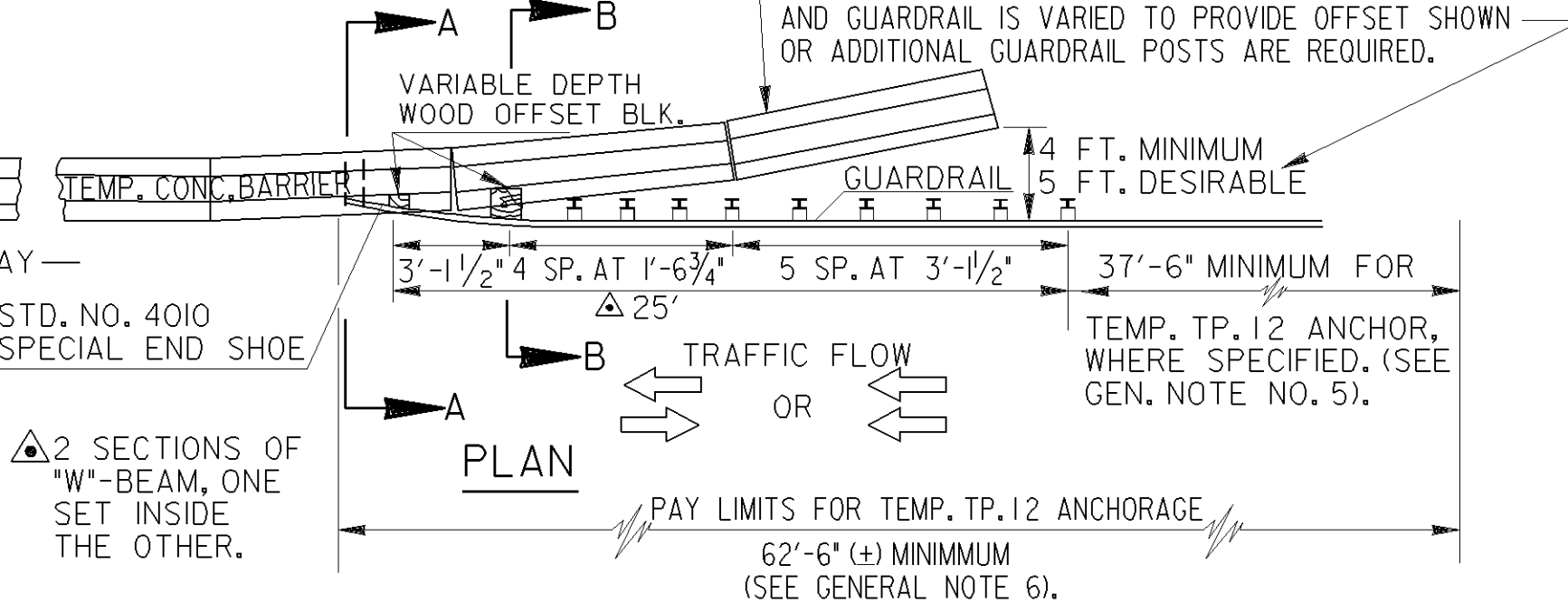
GUARDRAIL REQ'D, ON TRAILING END ONLY WHERE CONDITIONS WARRANT.



PLAN

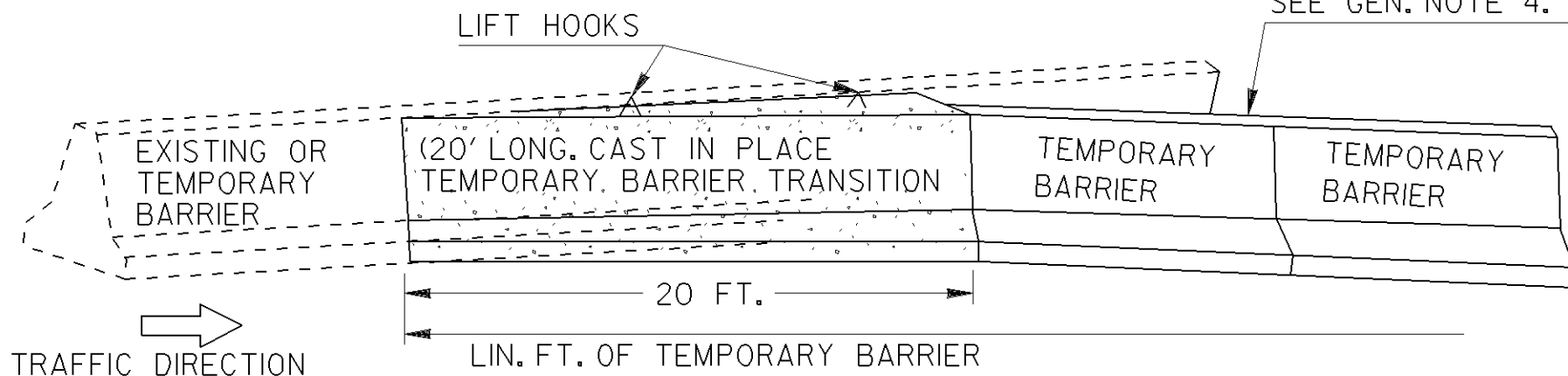
ONE-WAY TRAFFIC TRAILING END

FOR BARRIER SECTIONS BEHIND GUARDRAIL, THE FLARE RATE(FR) MAY BE ALTERED, AS NEEDED, TO PROVIDE THE 4' OR 5' OFFSET SHOWN HERE



OPTION
④

TEMPORARY BARRIER TRANSITION - CAST - IN - PLACE
(REQUIRED WHERE TEMPORARY BARRIER BUTTS AGAINST PERMANENT BARRIER)



NOTES:

1. COVER PERMANENT BARRIER, PAVEMENT, & PRECAST SECTIONS WITH POLYETHYLENE AS A BOND BREAKER.
2. PLACE BARRIER SIDE FORMS AGAINST PERMANENT & TEMP. BARRIER TO FORM SMOOTH TRANSITION.
3. USE CLASS "A" CONCRETE, A TYPE I FINISH IS SUFFICIENT.
4. TRANSITION SHALL BE COMPLETED BEFORE TEMPORARY BARRIER IS EXPOSED TO ON-COMING TRAFFIC.
5. TRANSITION IS NOT REQ'D. AT TRAILING END OF ONEWAY TRAFFIC FLOW.
6. TRANSITION WILL BE PAID FOR AS TEMPORARY BARRIER. PAYMENT INCLUDES REUSE, REMOVE AND DISPOSAL. TEMPORARY MEDIAN TRANSITION WILL BE PROVIDED BY THE CONTRACTOR WITH PAYMENT MADE AT THE PRICE BID FOR BARRIER AS SPECIFIED IN THE PLANS.

END TREATMENT FOR BARRIER TERMINAL

WHERE BARRIER END OFFSETS REQUIRED IN OPTION ① CAN NOT BE OBTAINED THEN, A TEMPORARY GUARDRAIL ANCHORAGE AT THE BARRIER END WILL BE REQUIRED AS PER OPTION ②. IF INSTALLATION OF GUARDRAIL ANCHORAGE IS NOT PRACTICAL DUE TO LOCAL CONDITIONS, A TEMPORARY PORTABLE IMPACT ATTENUATOR SHOULD BE USED AT THE BARRIER END AS PER OPTION ③.

- ① = FIRST OPTION, MINIMUM OFFSET IS OBTAINED.
- ② = SECOND OPTION, TEMPORARY GUARDRAIL ANCHORAGE, AS SPECIFIED.
- ③ = THIRD OPTION, PORTABLE ATTENUATOR.
- ④ = FOURTH OPTION, TERMINATE WITH A CAST-IN-PLACE TRANSITION.
- ⑤ = FIFTH OPTION, CONNECT TO GUARDRAIL.

GENERAL NOTES:

1. BARRIERS SHALL BE PLACED SUCH THAT OPENINGS BETWEEN INDIVIDUAL SECTIONS SHALL BE KEPT TO A MAXIMUM. ALL JOINTS BETWEEN PRECAST SECTIONS SHALL BE CONNECTED AS REQUIRED BY GA. STANDARD 496I AND/OR MANUFACTURERS RECOMMENDATIONS.
2. THE BARRIER IS NOT TO BE CONNECTED TO THE BRIDGE DECK BY CONNECTING PINS OR REBAR UNLESS AN APPROVED METHOD FOR CONNECTION IS REQUIRED.
3. PRECAST BARRIER SECTIONS SHALL CONFORM TO THE DIMENSIONAL REQUIREMENTS IN GA. STANDARD 496I AND/OR MANUFACTURERS RECOMMENDATIONS.
4. TRAFFIC CONTROL NOT SHOWN ON THIS STANDARD SHALL BE IN ACCORDANCE WITH CURRENT EDITION OF SECTION 150, STANDARDS, CONSTRUCTION DETAILS AND/OR PLAN SHEETS, DRUMS, ETC. SHOWN FOR OPTION ④ SHALL BE APPLICABLE FOR THE OTHER OPTIONS AS WELL. DRUMS SHALL BE PROVIDED IN ADVANCE OF TEMPORARY BARRIERS INSTALLATION AND SHALL BE IN PLACE BEFORE THE BARRIER IS INSTALLED AND REMOVED AFTER THE BARRIER IS REMOVED.
5. WHERE TEMPORARY GUARDRAIL ANCHORAGE IS SPECIFIED, THE FIRST BREAKAWAY SHALL BE 37'-6" MINIMUM IN ADVANCE OF BEGINNING THE TEMPORARY BARRIER INSTALLATION.
6. PAYMENT FOR TEMPORARY GUARDRAIL ANCHORS INCLUDES END SHOE, CONNECTING BOLTS, NUTS AND WASHERS, ADDITIONAL POSTS AND OFFSETS BLOCKS, 25 FT. ADDITIONAL "W"-BEAM WITH THE DOUBLE NESTED SECTION PLUS STANDARD ANCHORAGE COMPONENTS. (TOTAL LENGTH-62'-6" (+) MIN.
7. UNACCEPTABLE OR NON-STANDARD END TREATMENT WILL NOT BE LEFT IN PLACE AFTER REMOVAL OF THE TEMPORARY BARRIER, ALL GUARDRAIL AND ALL ANCHORAGES LEFT IN PLACE WILL BE TREATED AS NECESSARY TO CONFORM WITH CURRENT STANDARDS IMMEDIATELY AFTER REMOVAL OF THE TEMPORARY BARRIER.

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

STANDARD
TEMPORARY BARRIER
(END TREATMENT OPTIONS)

NO SCALE

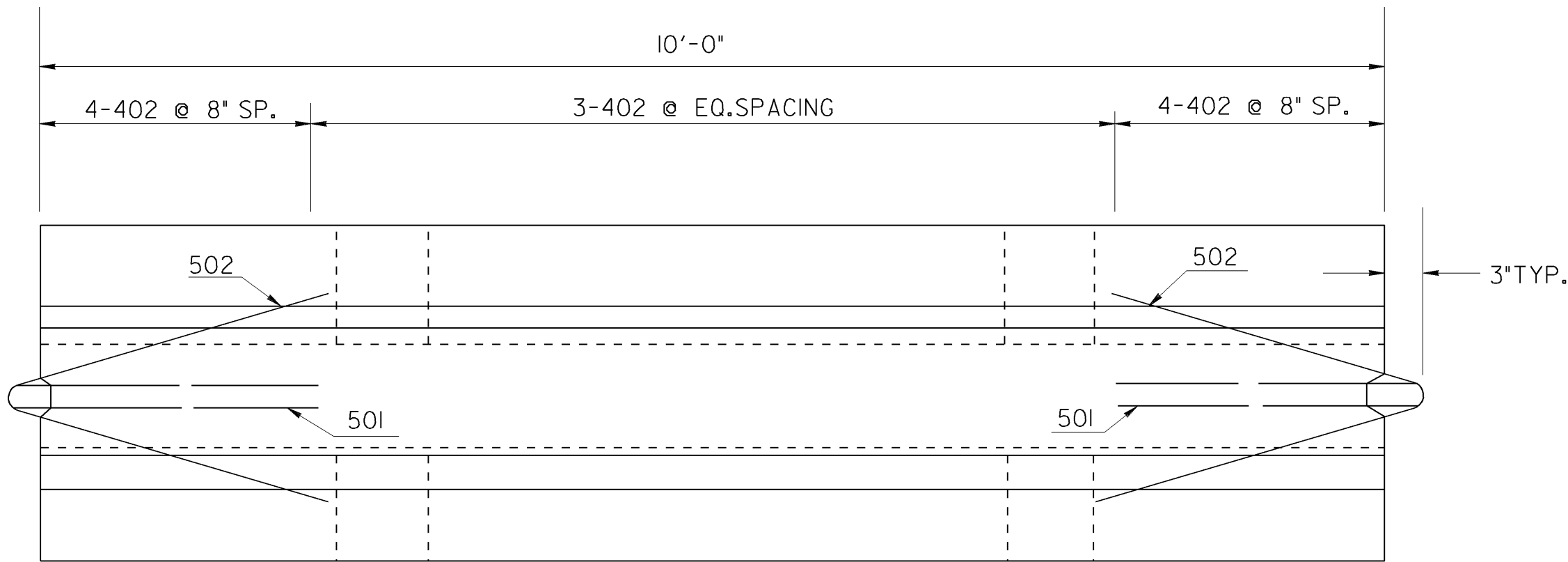
REV. & REDR. MAY, 1999

DES. _____ (SUBMITTED) *B. A. Smith*
TRA. _____ STATE ROAD & AIRPORT DESIGN ENGINEER
CHK. _____ (APPROVED) *O. L. Smith*
CHIEF ENGINEER

NUMBER
4960

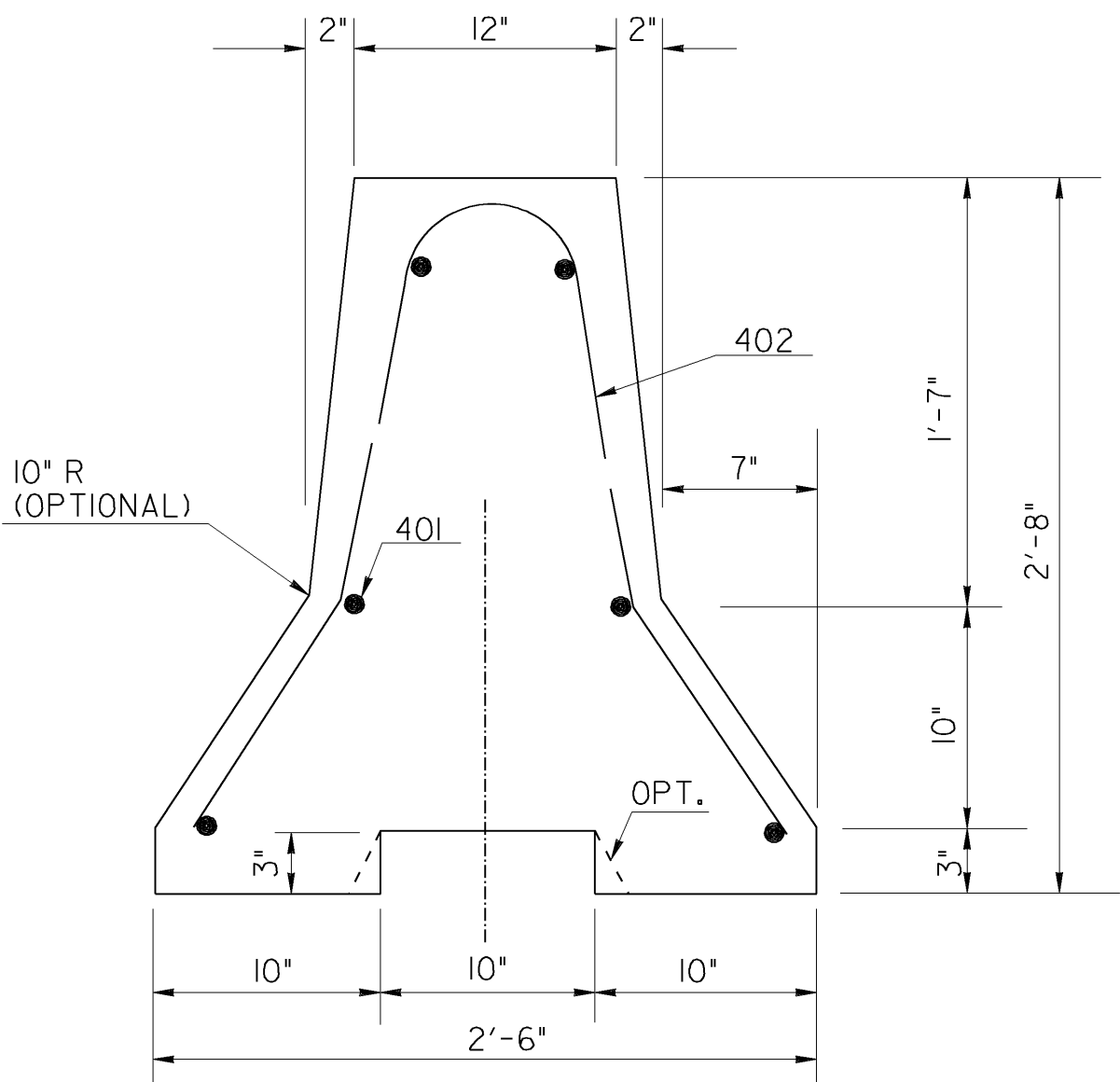
STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	WID 0208-1		

PRECAST CONCRETE BARRIER DETAILS

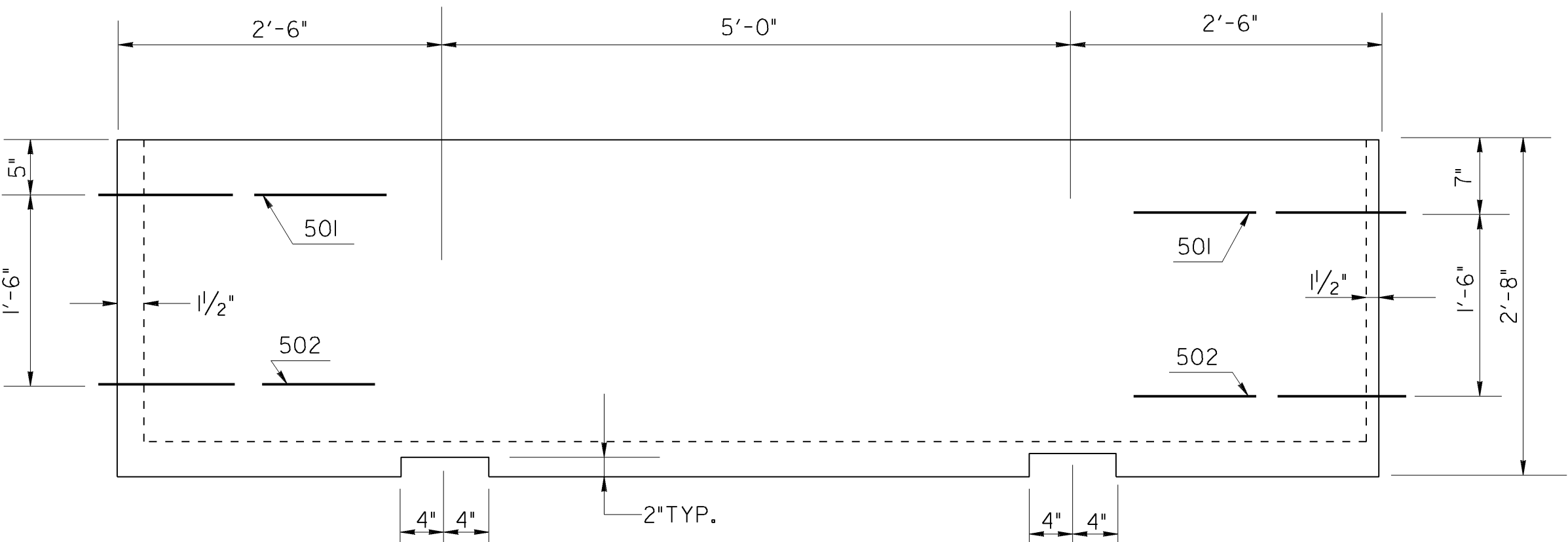


PLAN

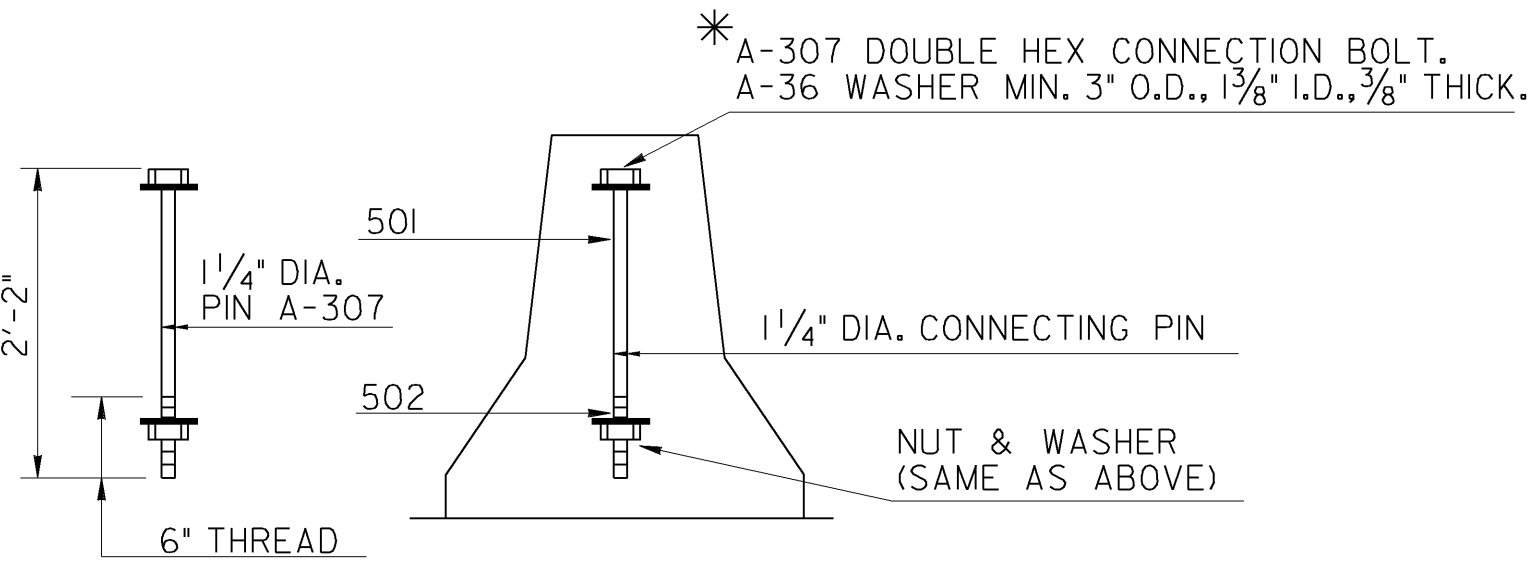
NOTE:
BARRIER SECTIONS SHALL BE CONNECTED TOGETHER WITH THE 1 1/4" DIA. A-307 DOUBLE HEX CONNECTION BOLT. THE BOTTOM NUT & WASHER SHALL BE MAINTAINED BY THE CONTRACTOR FOR THE DURATION OF THE BARRIER INSTALLATION.



END ELEVATION



SIDE VIEW

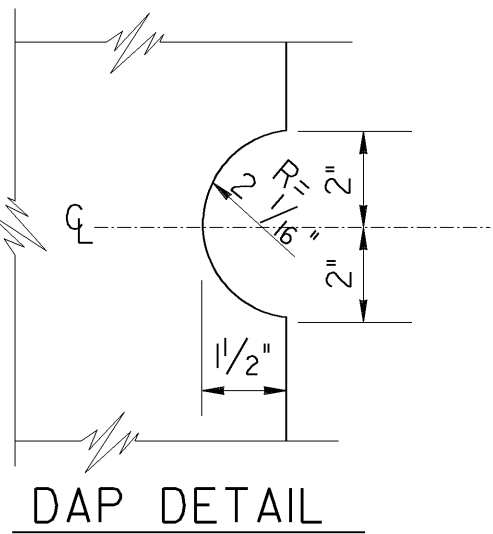
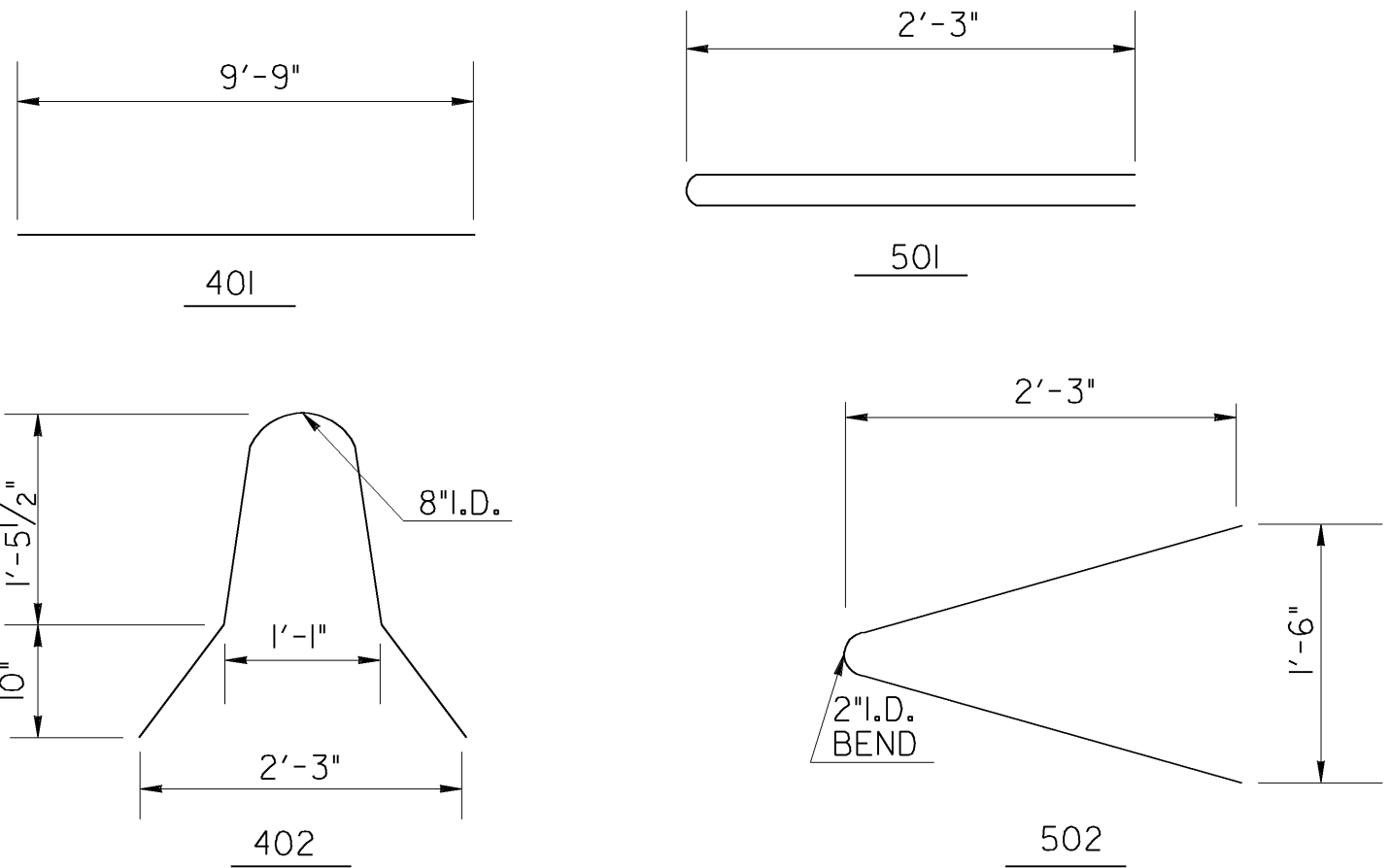


PIN CONNECTION

* AN ALTERNATE CONNECTING PIN WITH A FUSED NUT ON THE TOP THREADED PORTION AND NUT AND WASHER AS SPECIFIED ON THE BOTTOM MAY ALSO BE USED.

GENERAL NOTES:

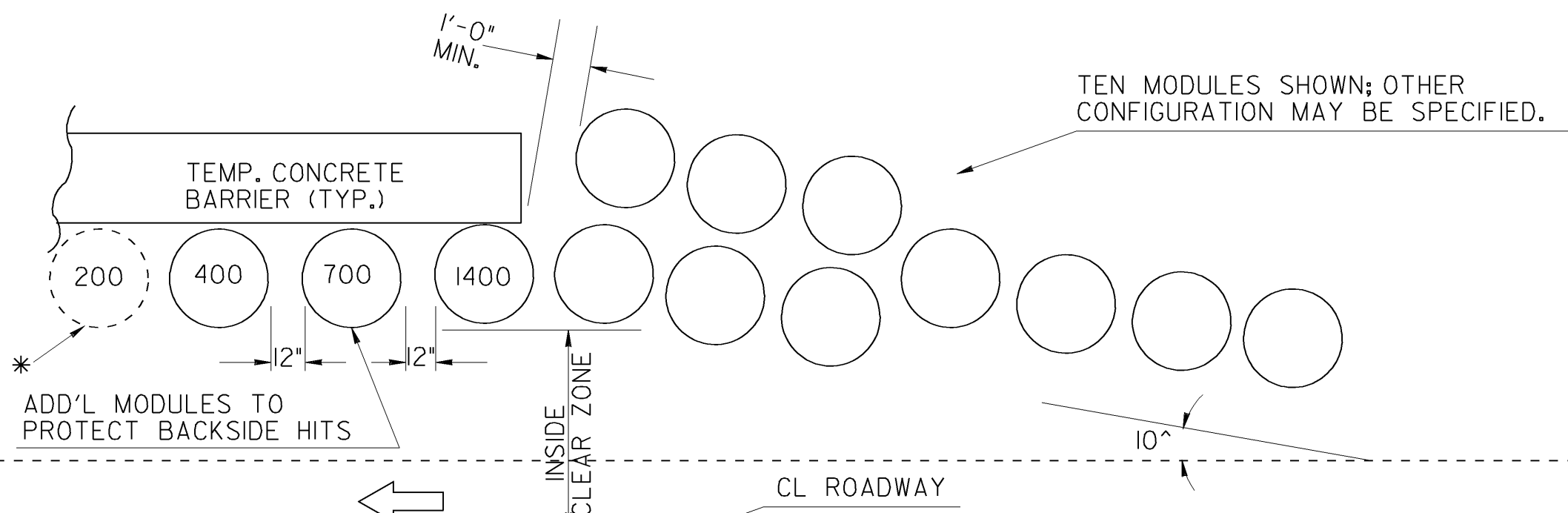
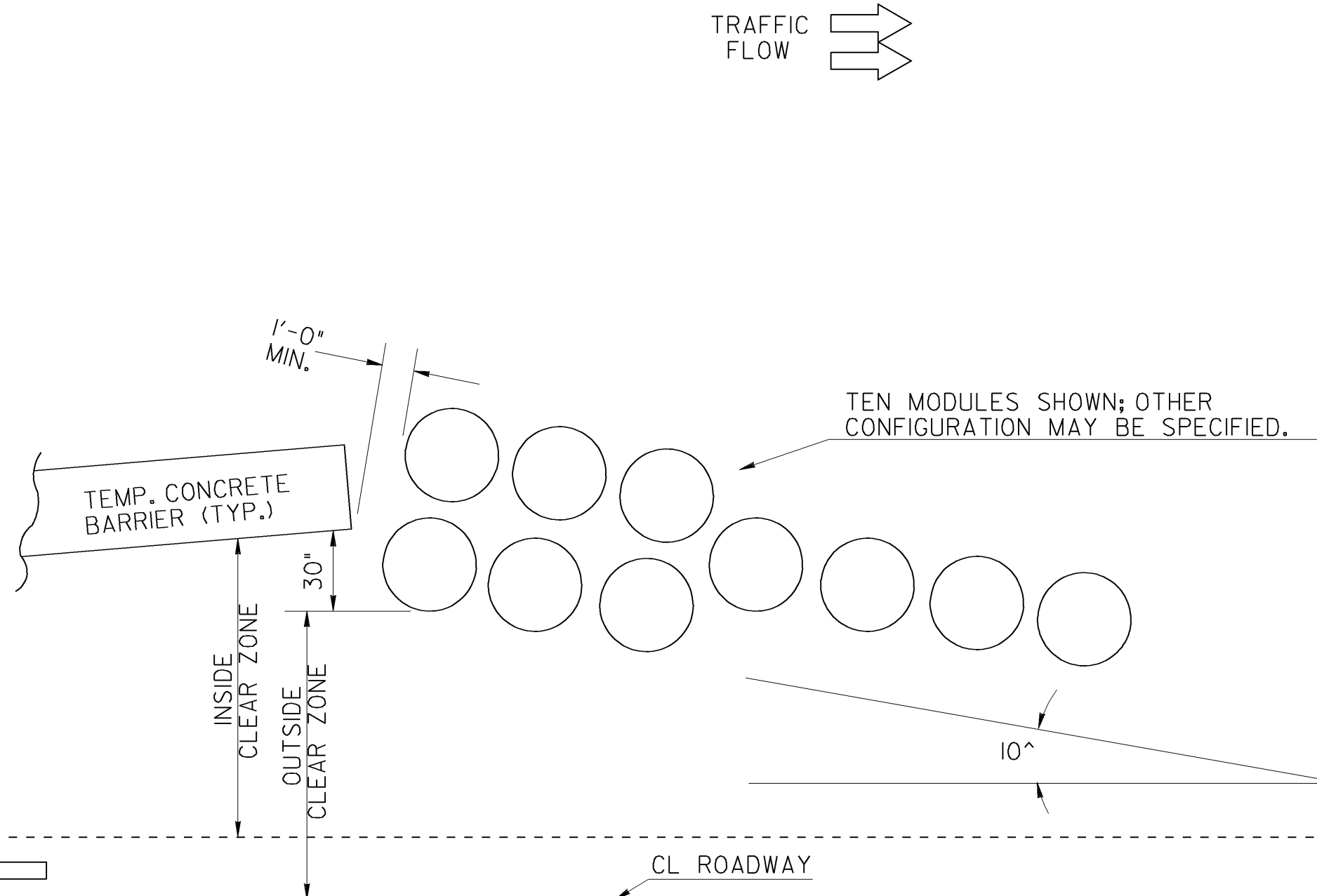
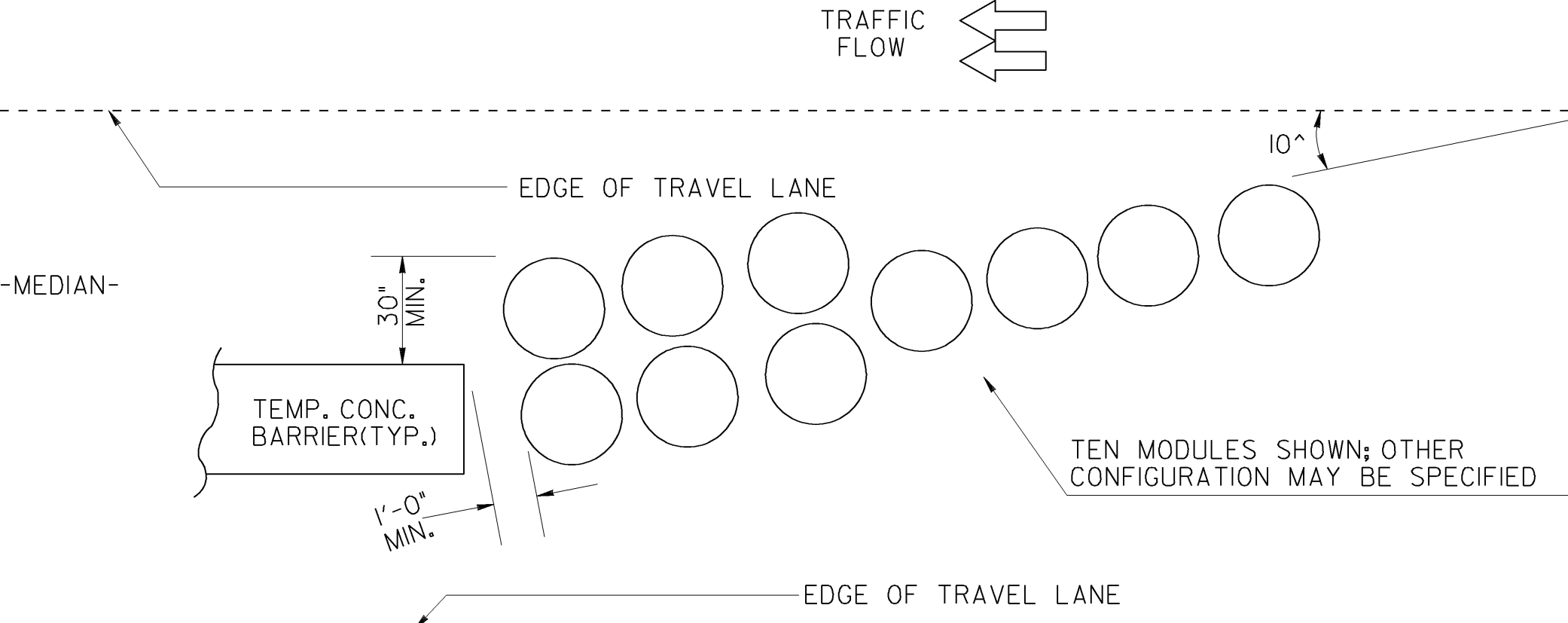
- 1-MATERIALS: CLASS 'A' CONCRETE AND 40 STEEL.
- 2-SEE GA. SPECIFICATIONS FOR BASIS OF PAYMENT AND METHOD NO. ____.
- 3-REINFORCEMENT, HAVING AN AREA AT LEAST EQUAL TO REBARS SHOWN, MAY BE USED AS AN ALTERNATE.
- 4-BARRIERS SHALL BE PLACED SUCH THAT OPENINGS BETWEEN INDIVIDUAL SECTIONS SHALL BE KEPT TO A MAXIMUM.



DAP DETAIL

REV. CONNECTION WASHER AND REV. GEN. NOTE NO. 4.	9-8-06	DATE	DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA
REV. REBAR & PIN CONN.	5-2-01	REVISION	STANDARD DETAILS OF PRECAST TEMPORARY BARRIERS
REV. COTTER PIN REQUIREMENT	5-10-96	REVISION	NO SCALE
BY	DES. _____ DRW. _____ TRA. _____ CHK. _____	DATE	NUMBER 4961
	(SUBMITTED) <i>[Signature]</i> STATE ROAD & AIRPORT DESIGN ENGR. (APPROVED) <i>[Signature]</i> CHIEF ENGINEER	AUG., 1995	

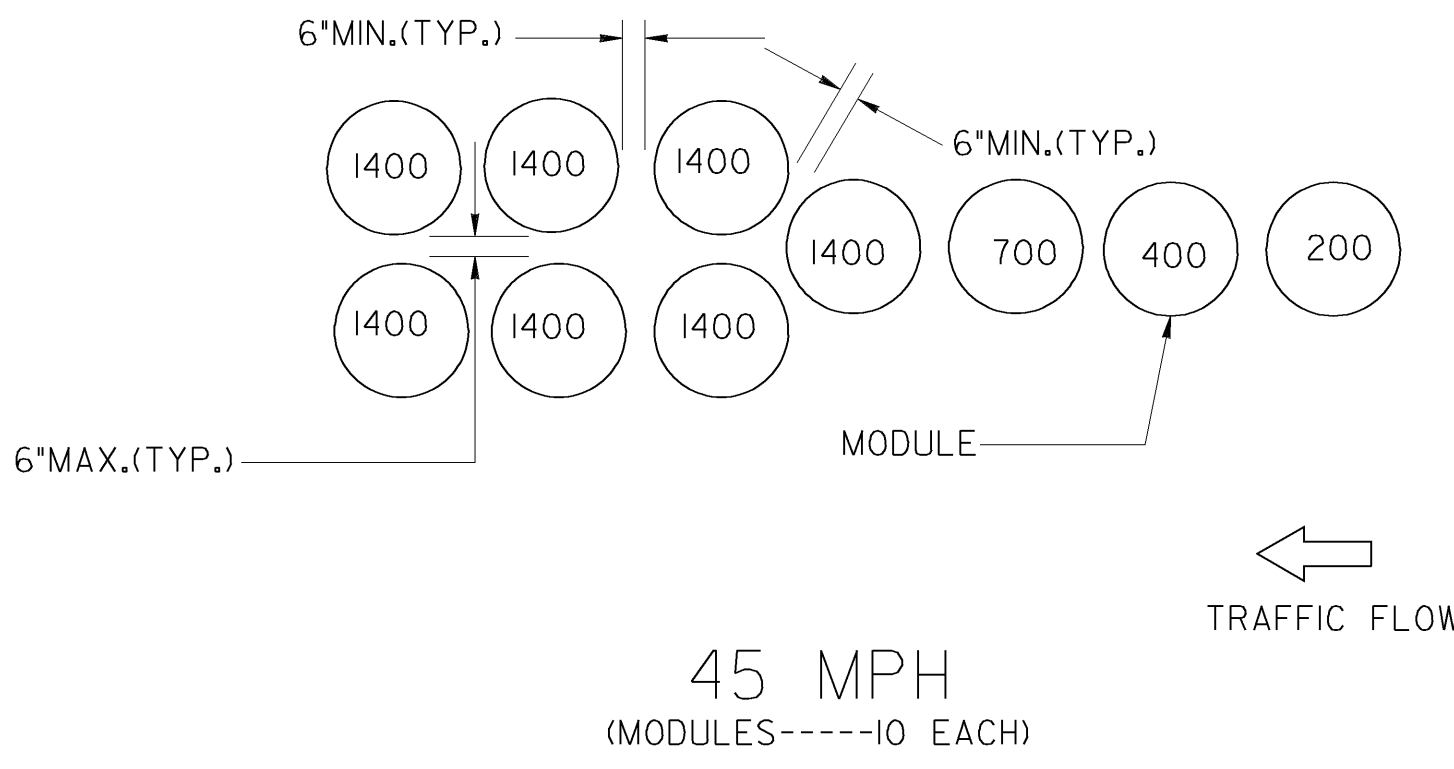
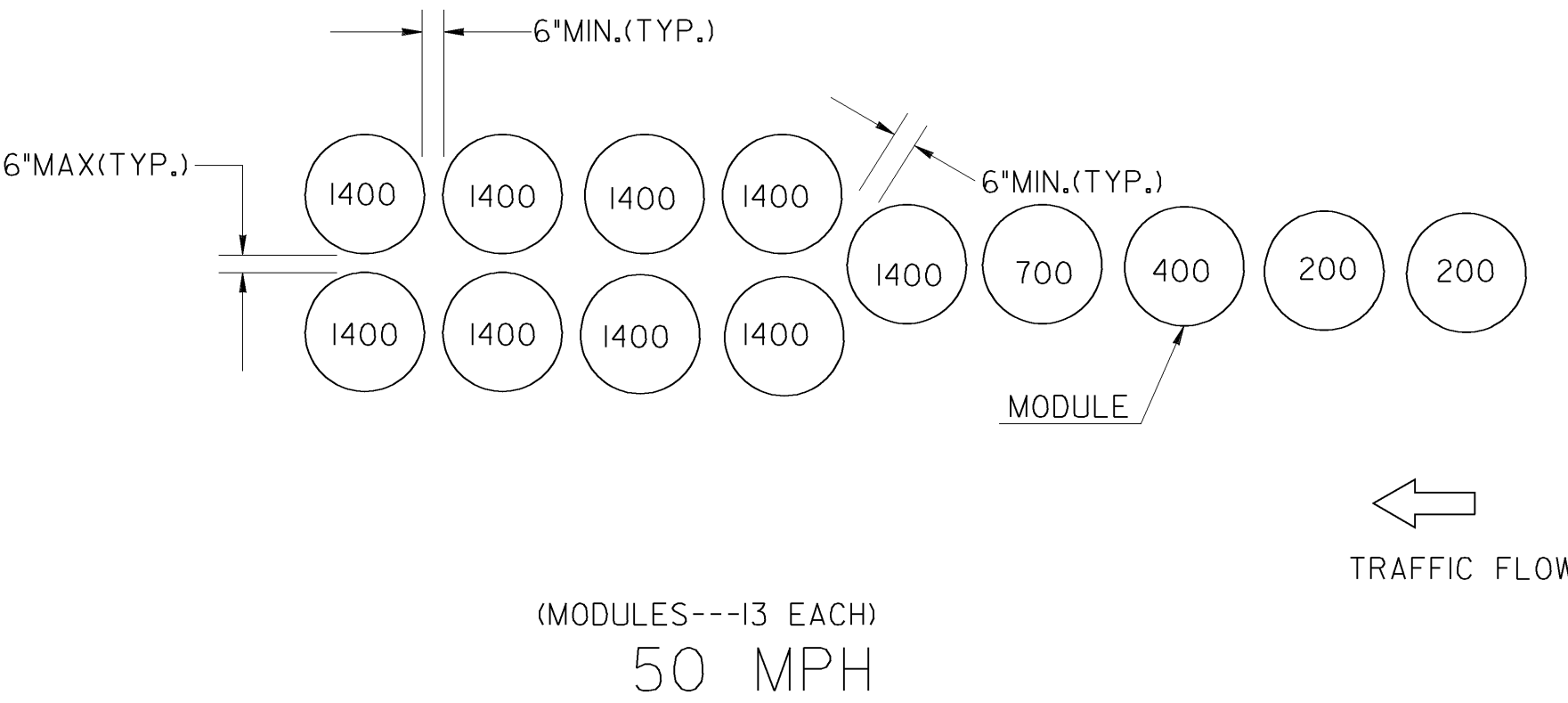
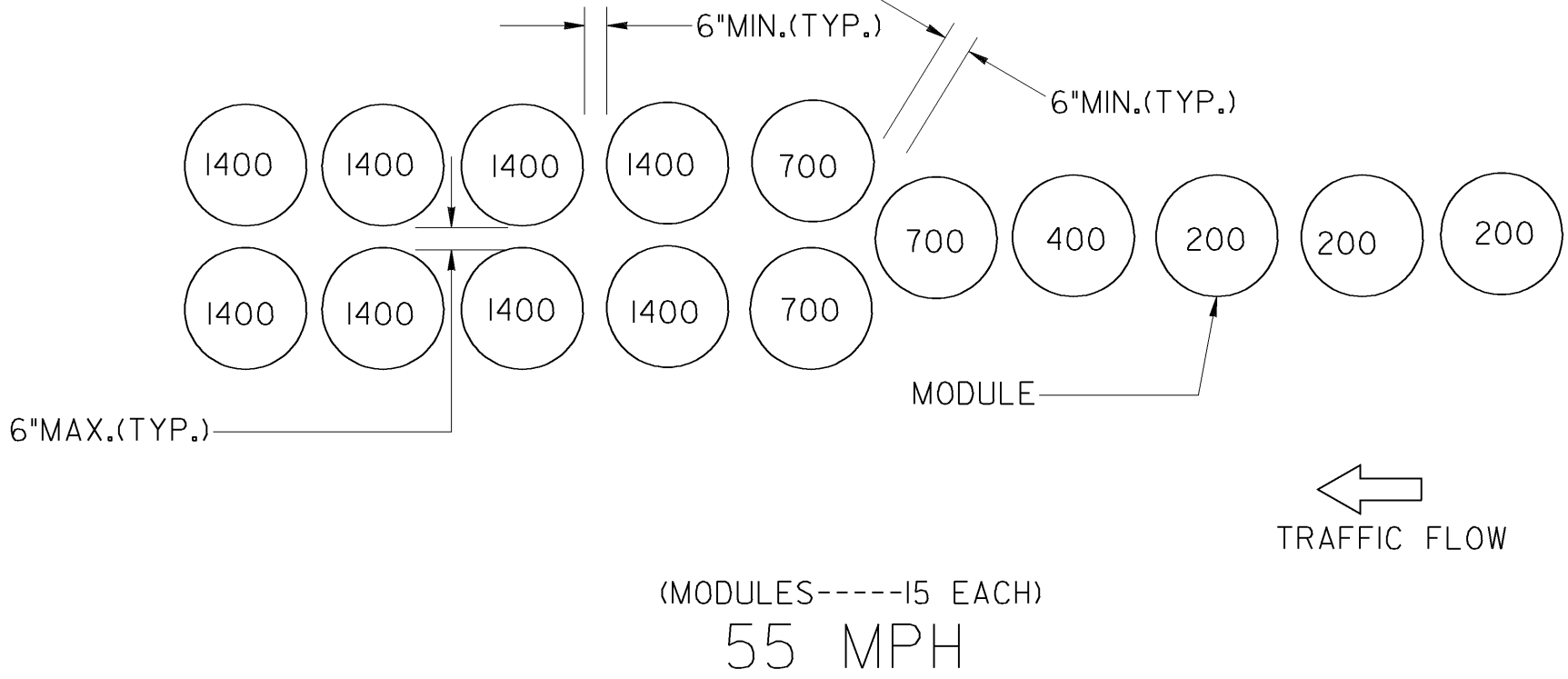
LOCATION POSITIONS



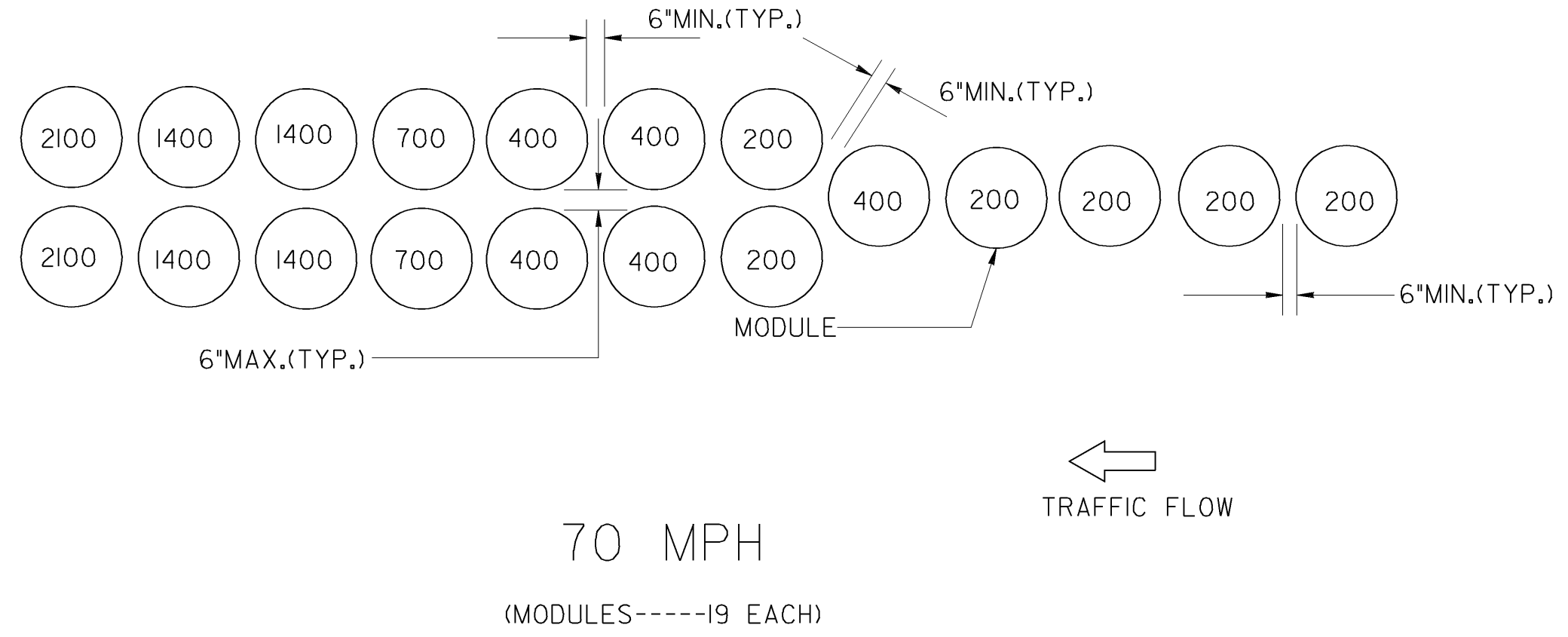
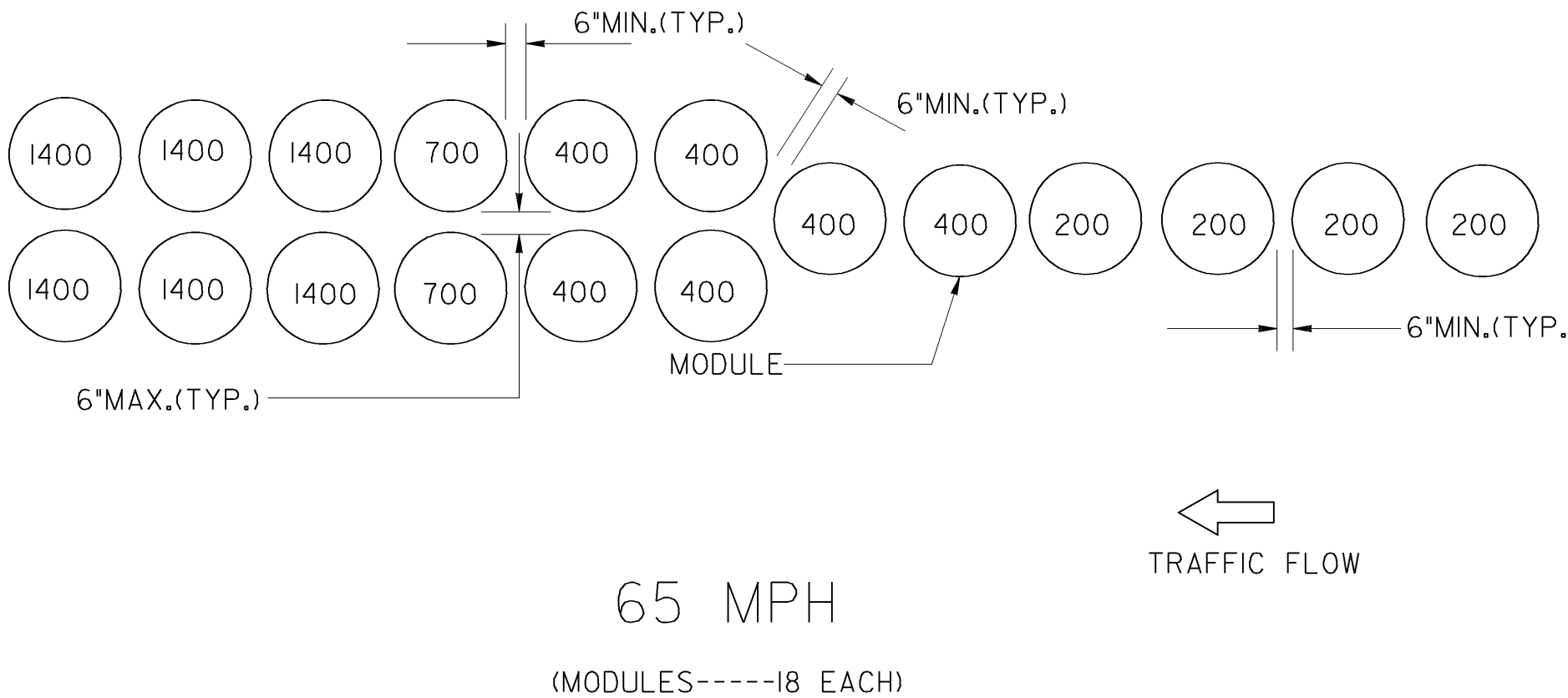
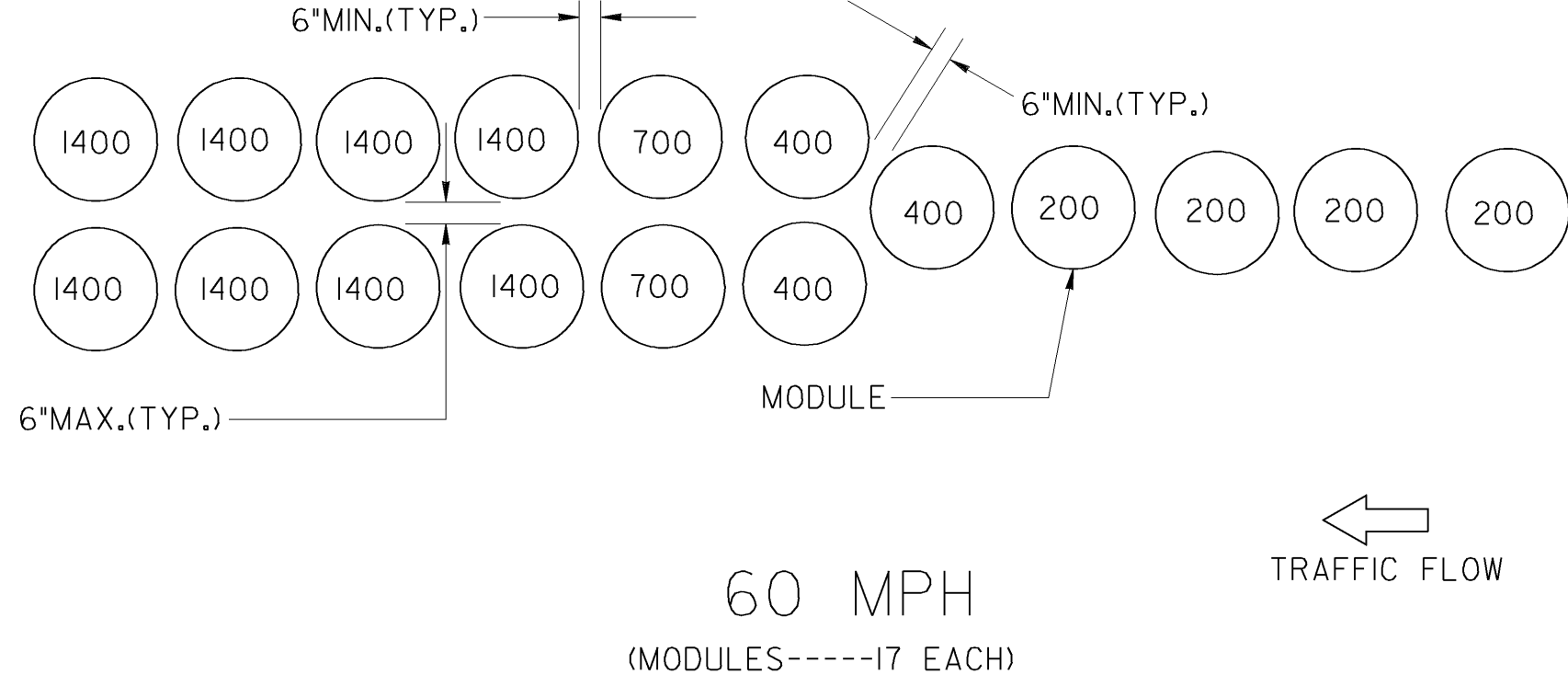
* 200* MODULE MAY BE OMITTED FOR SPEEDS OF 40 M.P.H. OR LESS.

NOTE: WHERE ADDITIONAL MODULES ARE REQUIRED ON THE BACKSIDE, THE TOTALS SUMMARIZED AT THE RIGHT SHALL BE INCREASED ACCORDINGLY.

TYPICAL ARRAY CONFIGURATION



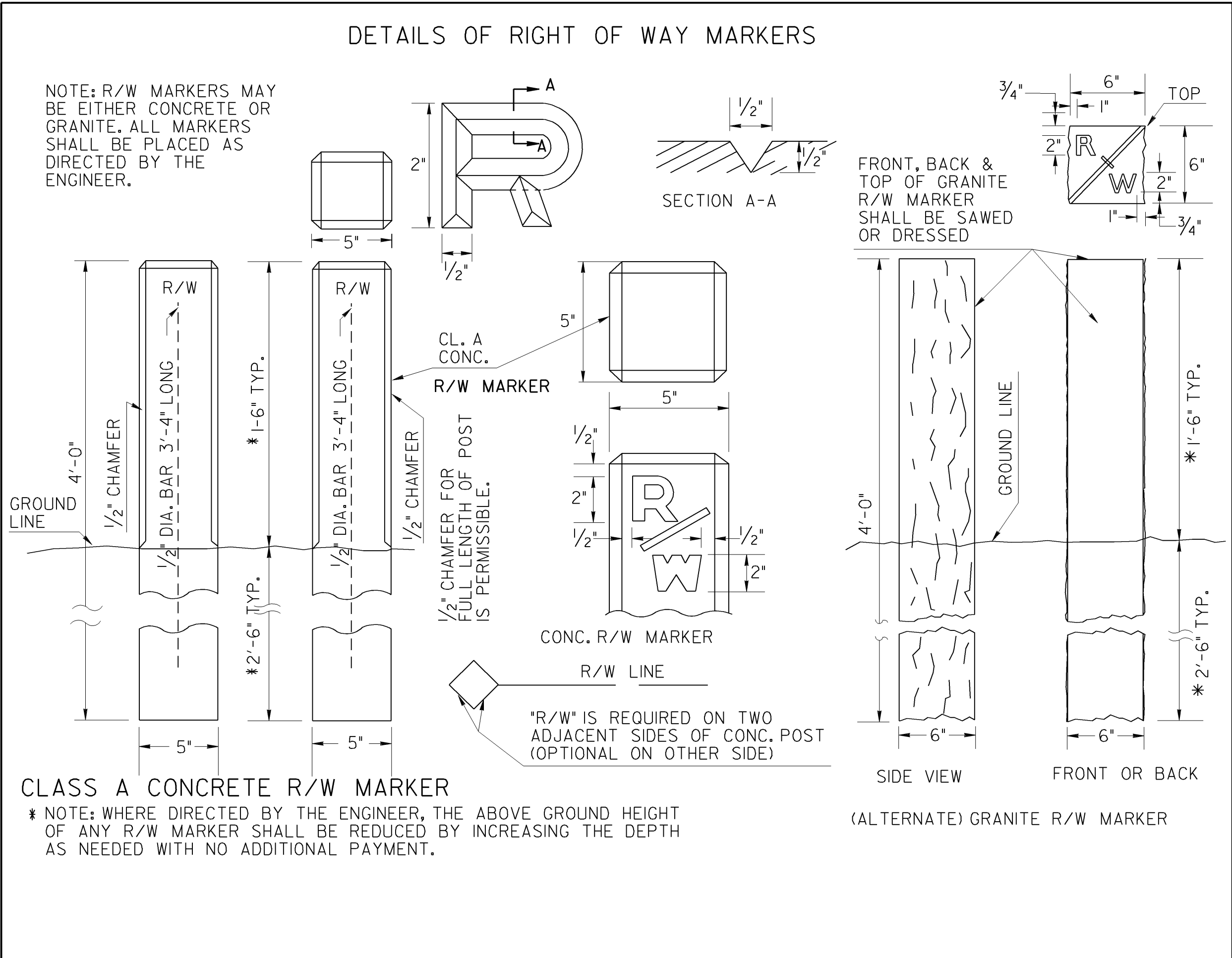
FOR 40 MPH ARRAY, SEE STD. 4960



- GENERAL NOTES:
- (1) SPECIFICATIONS: GEORGIA STANDARD, CURRENT EDITION, & SUPPLMENTS THERETO. SEE SECTION 150 FOR PAY ITEM DESIGNATION.
 - (2) NUMBERS SHOWN INSIDE MODULES REPRESENT POUNDS OF SAND.
 - (3) IN THE ABSENCE OF EITHER PAVING OR STABLE BASE OR BOTH, THE MODULES SHALL BE SET ON 3/4" THICK PLYWOOD SUPPORTS.
 - (4) ARRAYS SHOWN HERE ARE NOT TO BE USED IN GORE AREAS.
 - (5) ATTENUATOR SHALL BE AT A 10° ANGLE TO THE EDGE OF THE TRAVEL LANE.

5-11-99		6-30-98		DATE	
ADD TO MPH ARRAY		REVISION		BY	
C.J.P.		BY		DES. _____	
CHK. _____		CHK. _____		DWN. _____	
NO SCALE					
DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA					
STANDARD TEMPORARY TRAFFIC IMPACT ATTENUATOR SAND LOADED MODULES					
AUG., 1993					
NUMBER 4962					
DES. (SUBMITTED) <i>James A. Karpul</i> DWN. (APPROVED) <i>Tom L. Eubanks</i> CHK. CHIEF ENGINEER					

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	WID 0208-1		



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.		REVISION		NO SCALE	
STATE ROAD & AIRPORT DESIGN ENGINEER		CHIEF ENGINEER		REV. & REDR. DEC., 1981		NUMBER		9003					

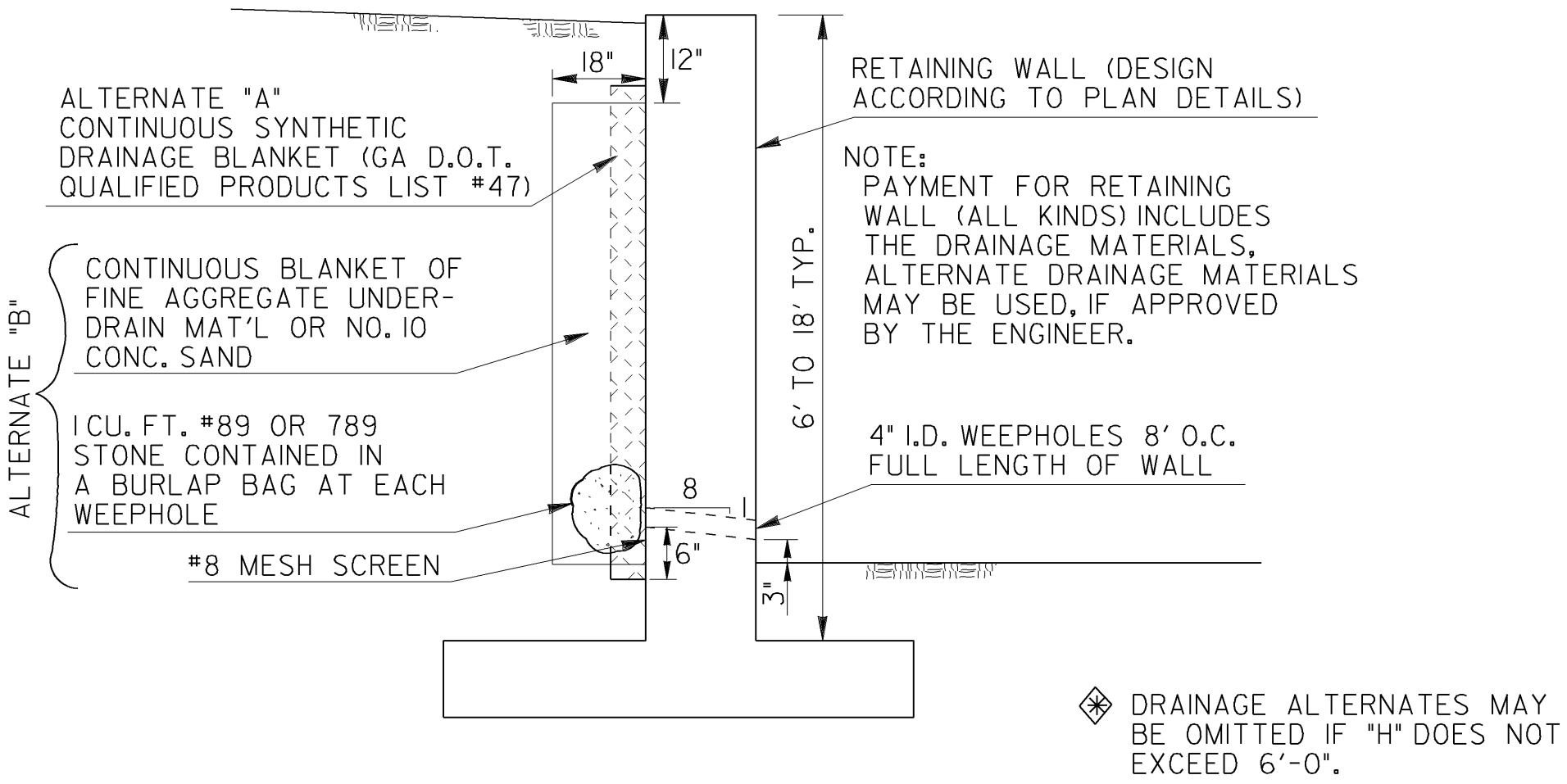
DETAILS OF RETAINING WALL TYPICAL SECTIONS

- (a) - SLOPED BACKFILL, NO DITCH
- (b) - SLOPED BACKFILL WITH DITCH
- (c) - FLAT BACKFILL

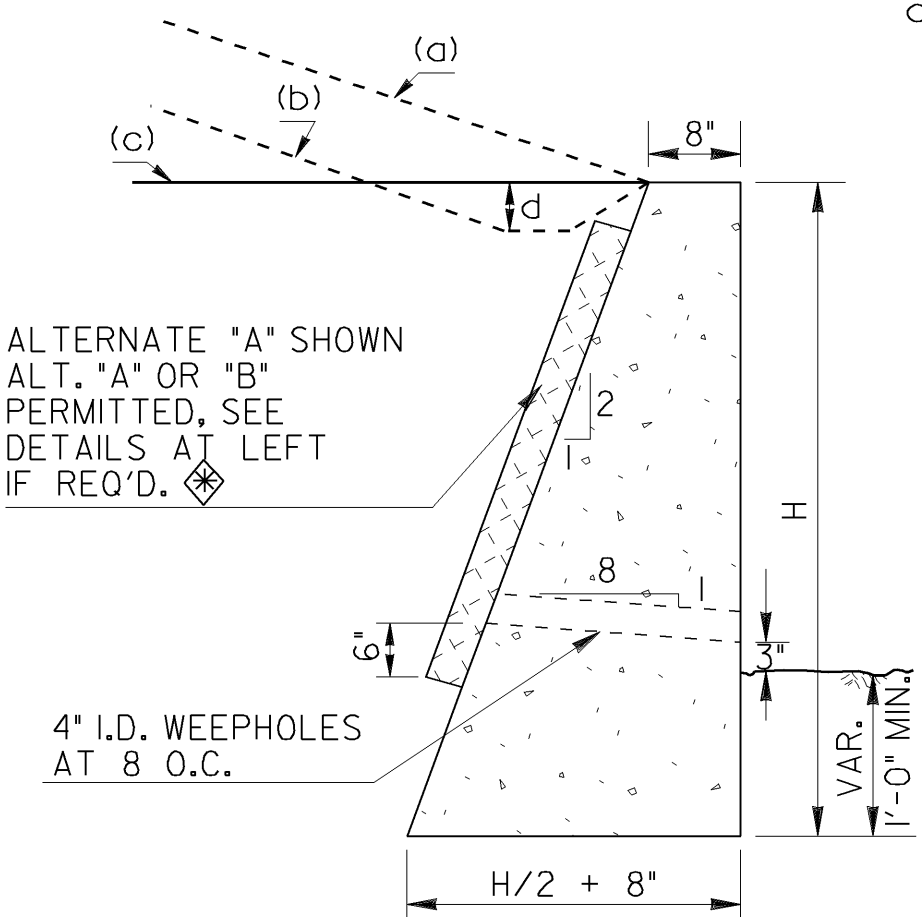
d = DITCH DEPTH, 6'-12" TYPICAL
SEE PLANS FOR DESIGN

MAXIMUM "H" *		
BACKFILL	PLAIN WALL	W.BARRIER FACE
FLAT	10'-0" **	10'-0"
SLOPE TO 4:1	6'-3"	7'-0"
SLOPE TO 2:1	4'-6"	4'-9"

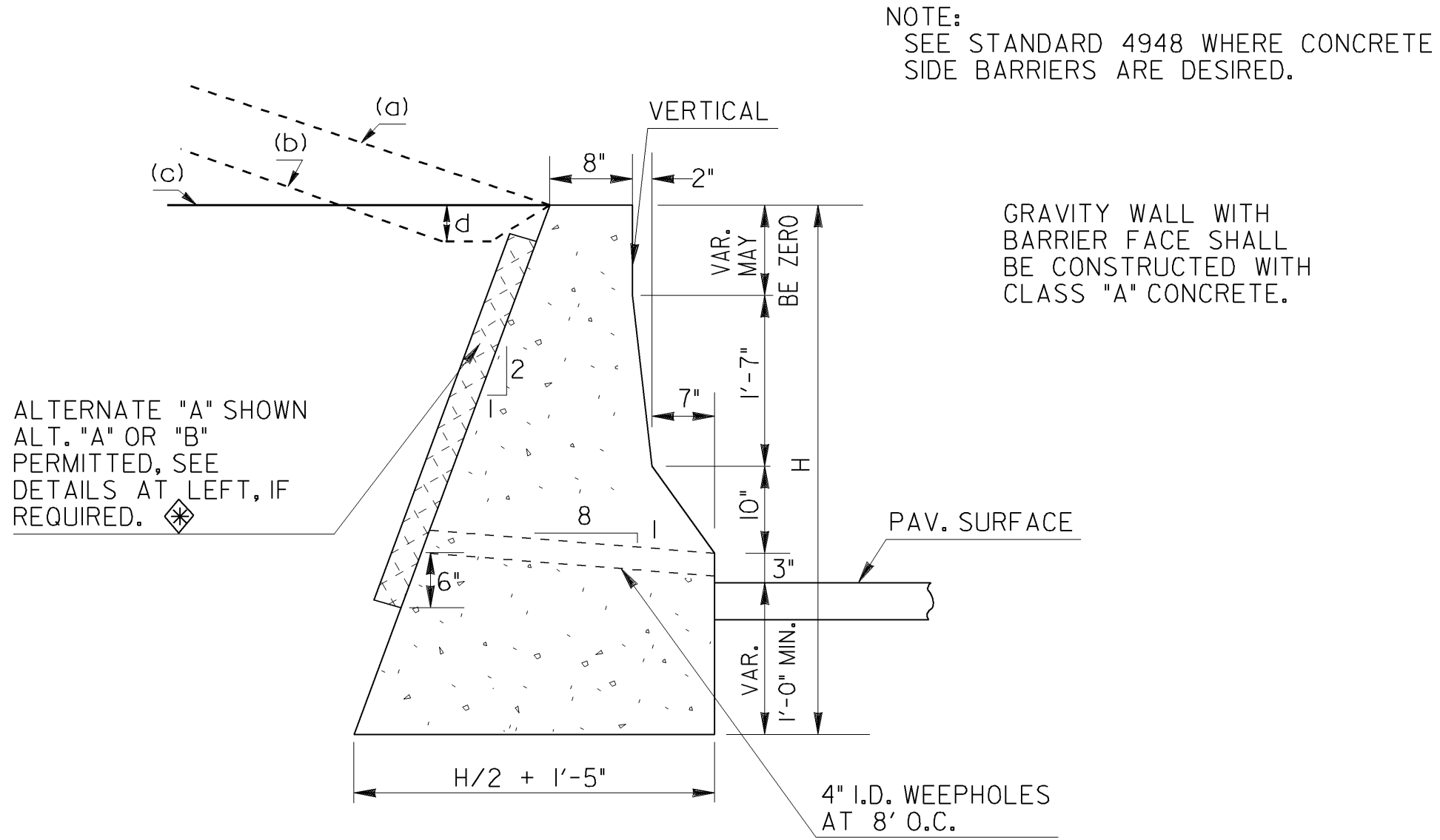
* GREATER "H" PERMITTED IF APPROVED BY BRIDGE DESIGN.
** MAXIMUM "H" OF 7'-3" HERE IF TRAFFIC IS ON BACKFILL.



STANDARD DRAINAGE FOR RETAINING WALLS
(FOR HEIGHTS FROM 6 FT. TO 18 FT. - SPECIAL DESIGN DRAINAGE REQUIRED FOR RETAINING WALLS OVER 18 FT. IN HEIGHT.)

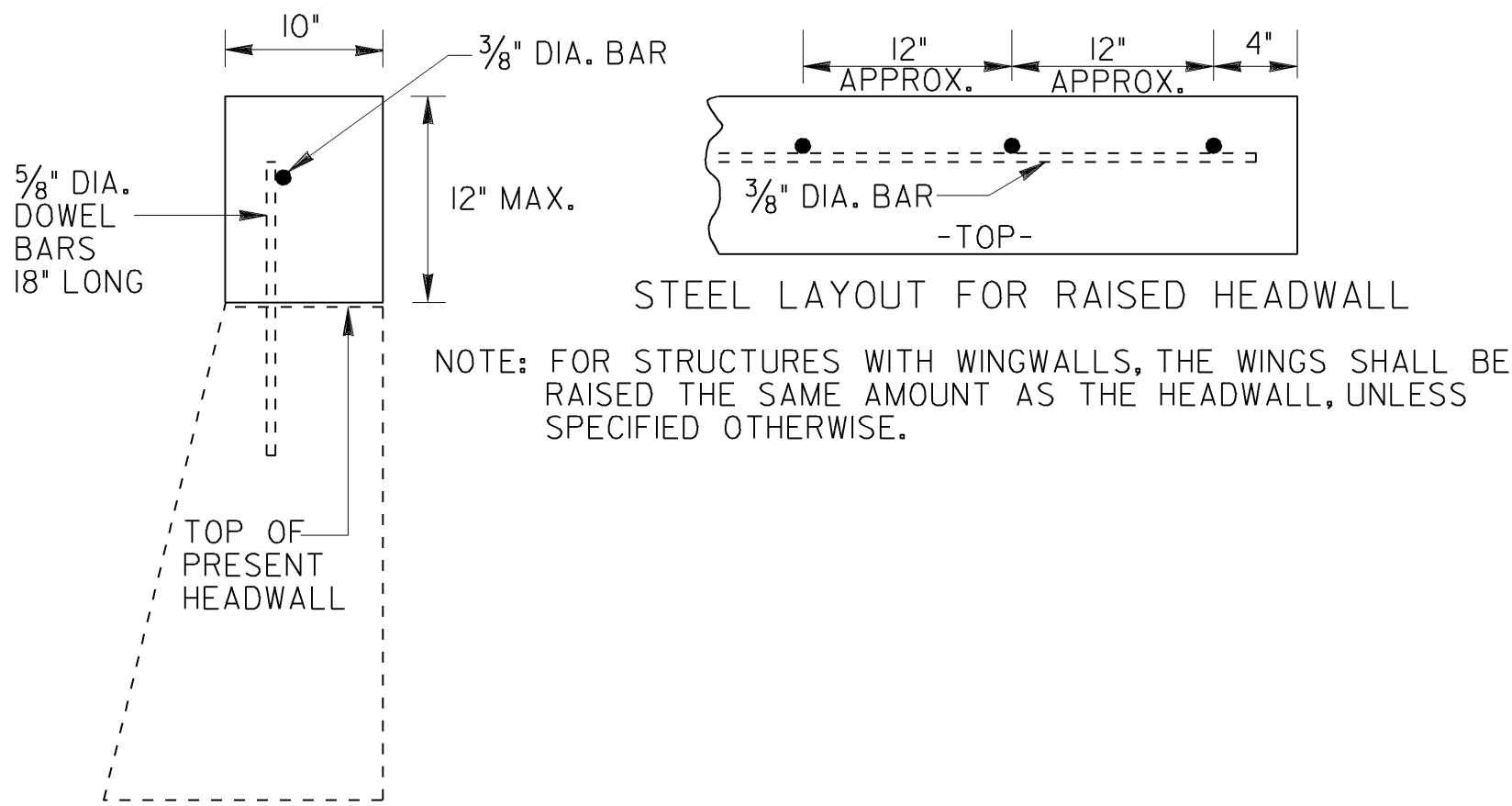


TYPICAL SECTION FOR GRAVITY TYPE WALL
MATERIALS: CLASS "B" CONC. OR MORTAR RUBBLE MASONRY.

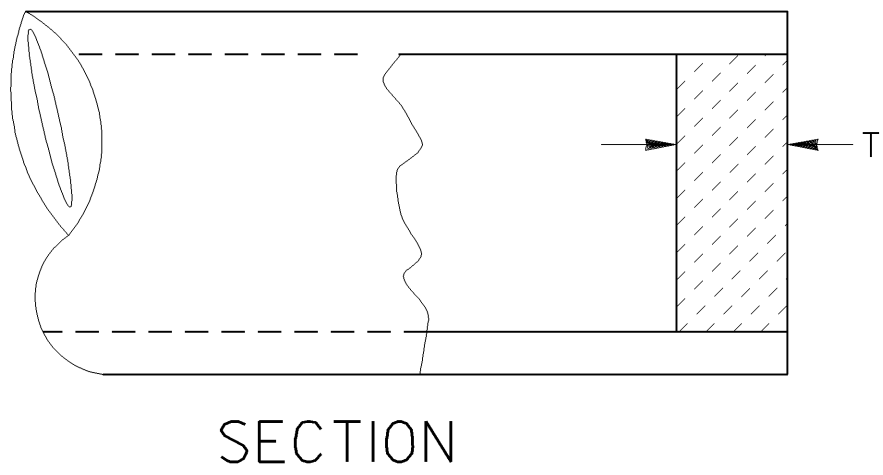


TYPICAL SECTION FOR GRAVITY WALL WITH BARRIER FACE

DETAIL FOR RAISING HEADWALL



TYPICAL PIPE PLUG



NOTE: PLAN PAY QUANTITIES ARE TO REFLECT PIPE PLUGS AS CU. YDS. OF CL. A OR CL. B CONCRETE. ON CONSTRUCTION PLUGS MAY BE BUILT WITH BRICK MASONRY, MORTAR RUBBLE MASONRY, CL. A CONC., OR CL. B CONC. WITH NO ADJUSTMENT IN PAYMENT MADE FOR ALTERNATES.

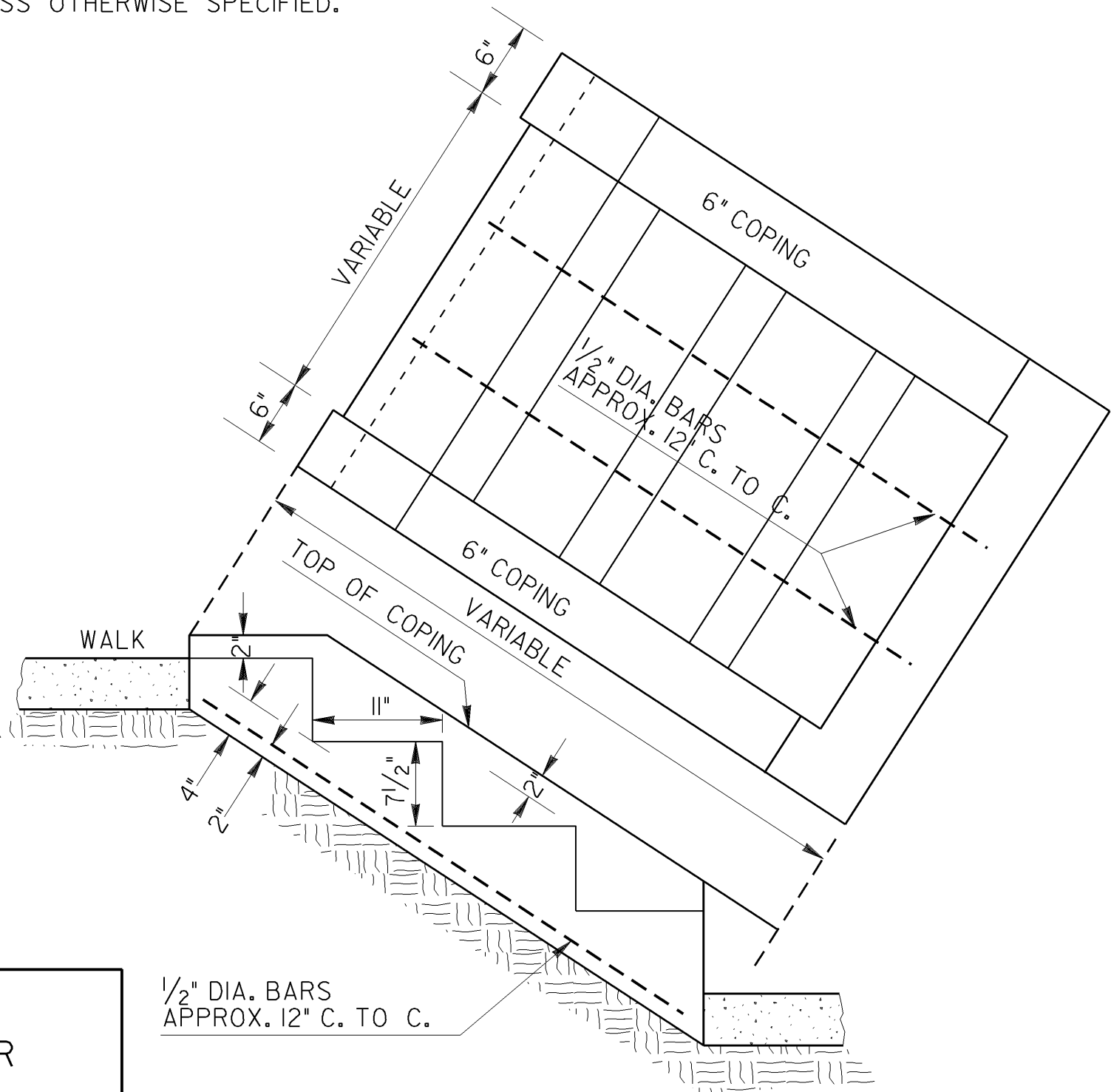
D	T (MIN)	PIPE PLUG (CU. YDS.)
12"	8"	0.0194
15"	8"	0.0303
18"	8"	0.0436
24"	8"	0.0776
30"	8"	0.1212
36"	8"	0.1745
42"	8"	0.2376
48"	8"	0.3103
54"	12"	0.5890
60"	12"	0.7272
66"	12"	0.8799
72"	12"	1.0472

6-30-98	4-30-84	2-15-83	DATE
REDRAWN	ADD PIPE PLUG DETAILS	RET. WALL "H" TABLE ADDED	REVISION
G.J.P.	R.M.U.	R.M.U.	BY
CHK.	R.K.C.	(APPROVED)	STATE HIGHWAY ENGINEER
DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA			
STANDARD RETAINING WALL TYPICAL SECTIONS, RAISING HEADWALL, AND TYPICAL PIPE PLUG.			
NO SCALE: REV. & REDR. DECEMBER, 1982			
REV. & R.M.U. (SUBMITTED) STATE ROAD & AIRPORT DESIGN ENGR.			
NUMBER 9031L SHEET 1 OF 2			

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	WID 0208-1		

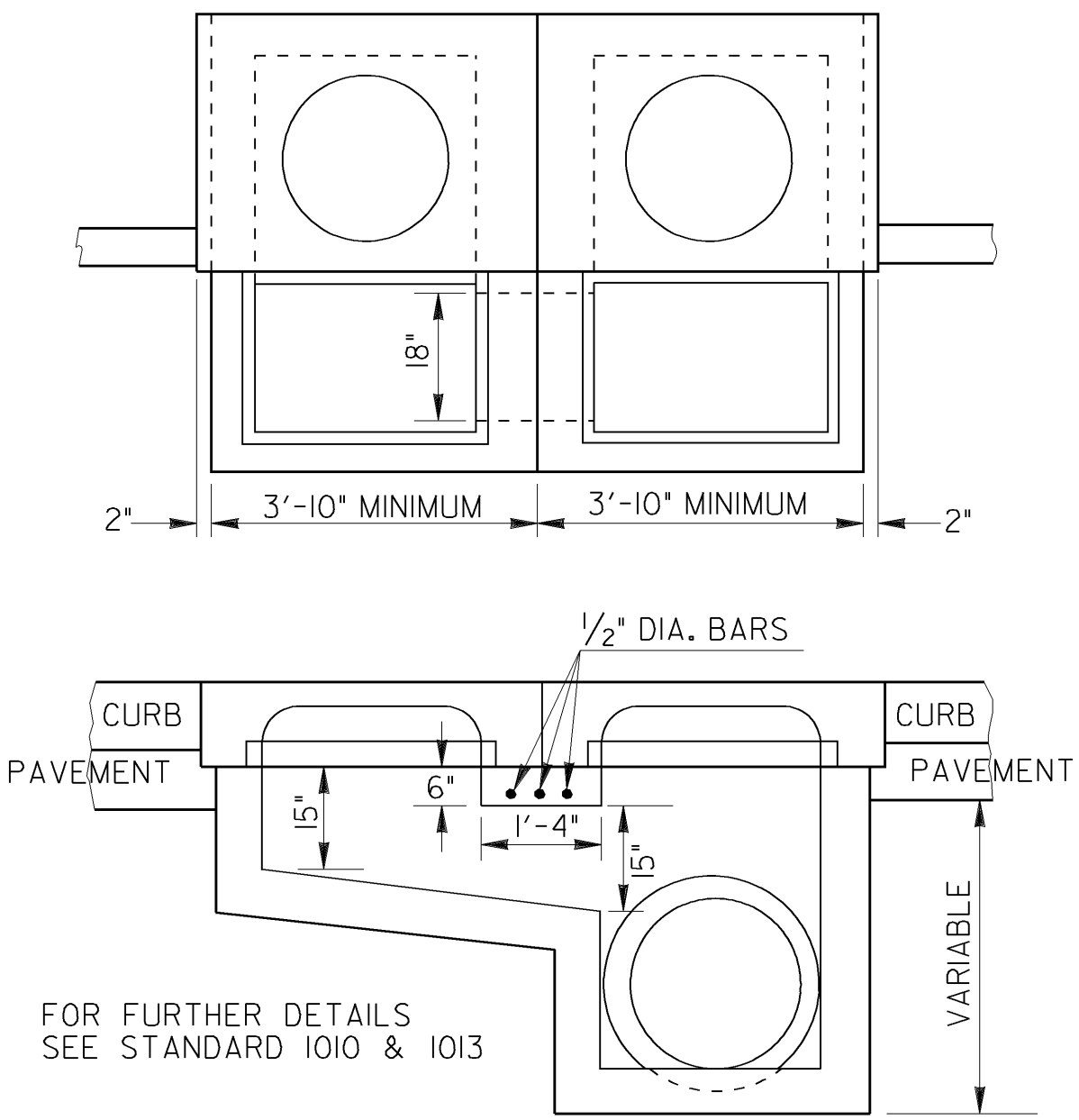
DETAIL OF CONCRETE STEPS

NOTE:
BASIS OF PAYMENT SHALL BE
CLASS "B" CONC. INCL. REINF. STEEL
UNLESS OTHERWISE SPECIFIED.

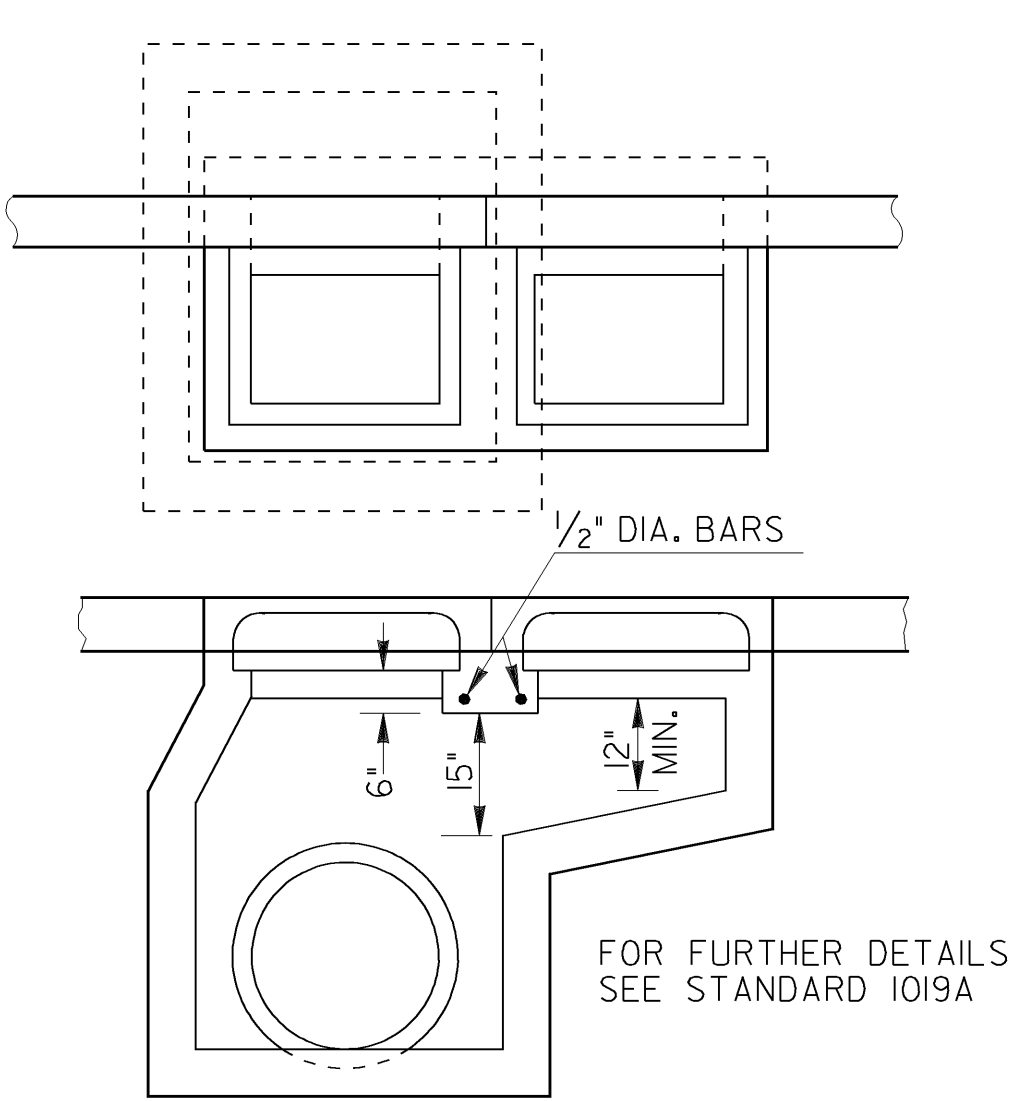


NOTE: RISE AND TREAD ARE TO BE ADJUSTED
TO FIT SLOPE. RISE NOT TO EXCEED 8".

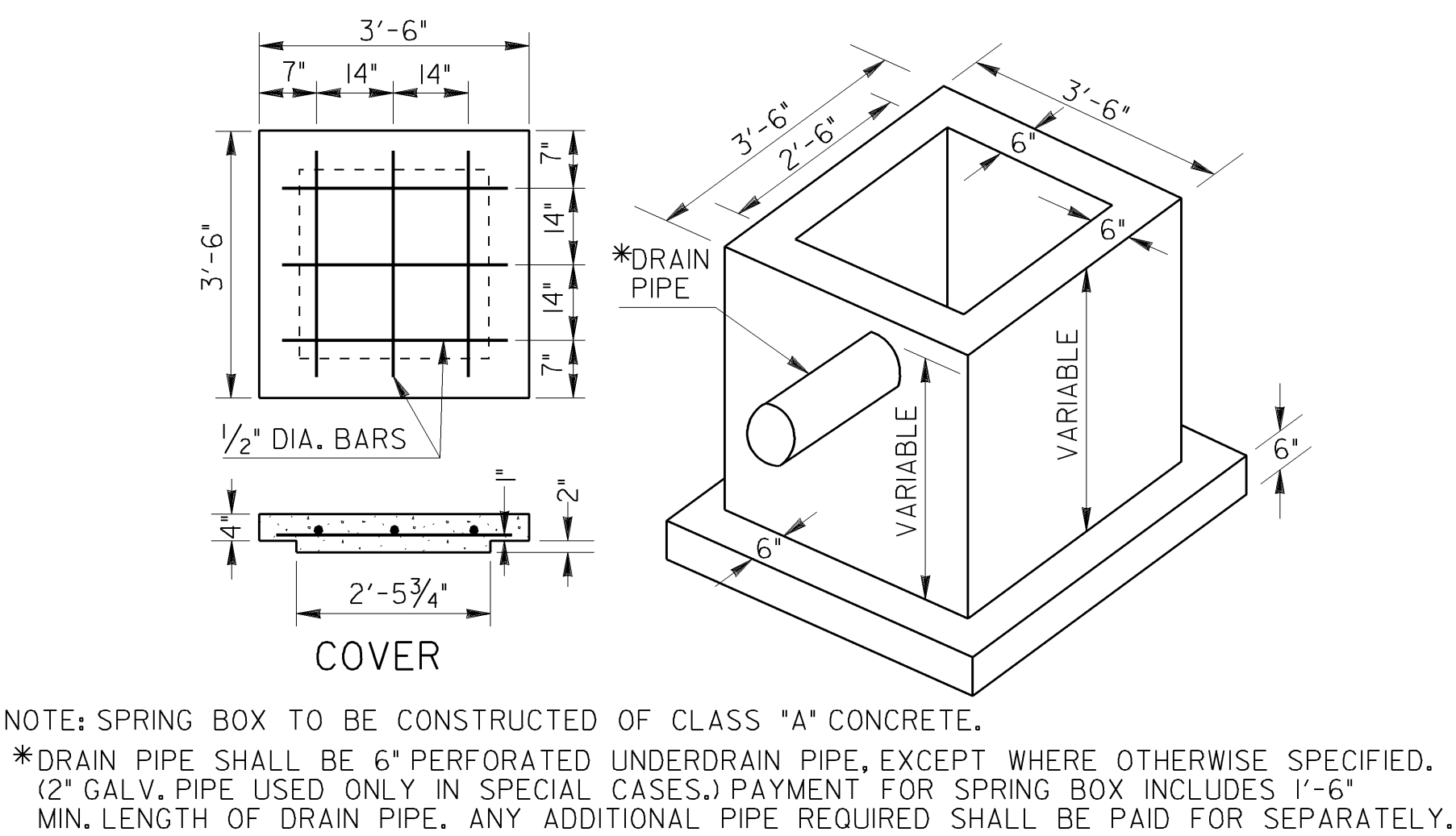
DETAIL OF CATCH BASIN
MODIFIED FOR DOUBLE GRATES



DETAIL OF DROP INLET
MODIFIED FOR DOUBLE GRATES

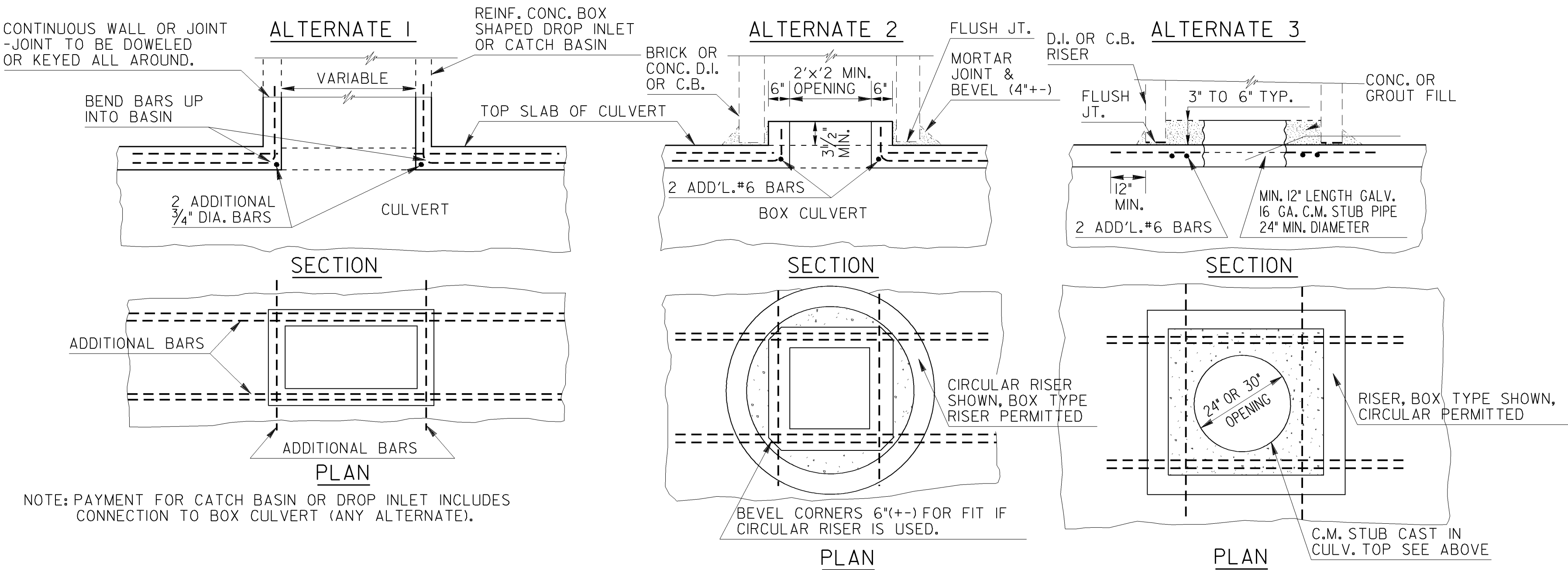


DETAIL OF CONCRETE SPRING BOX

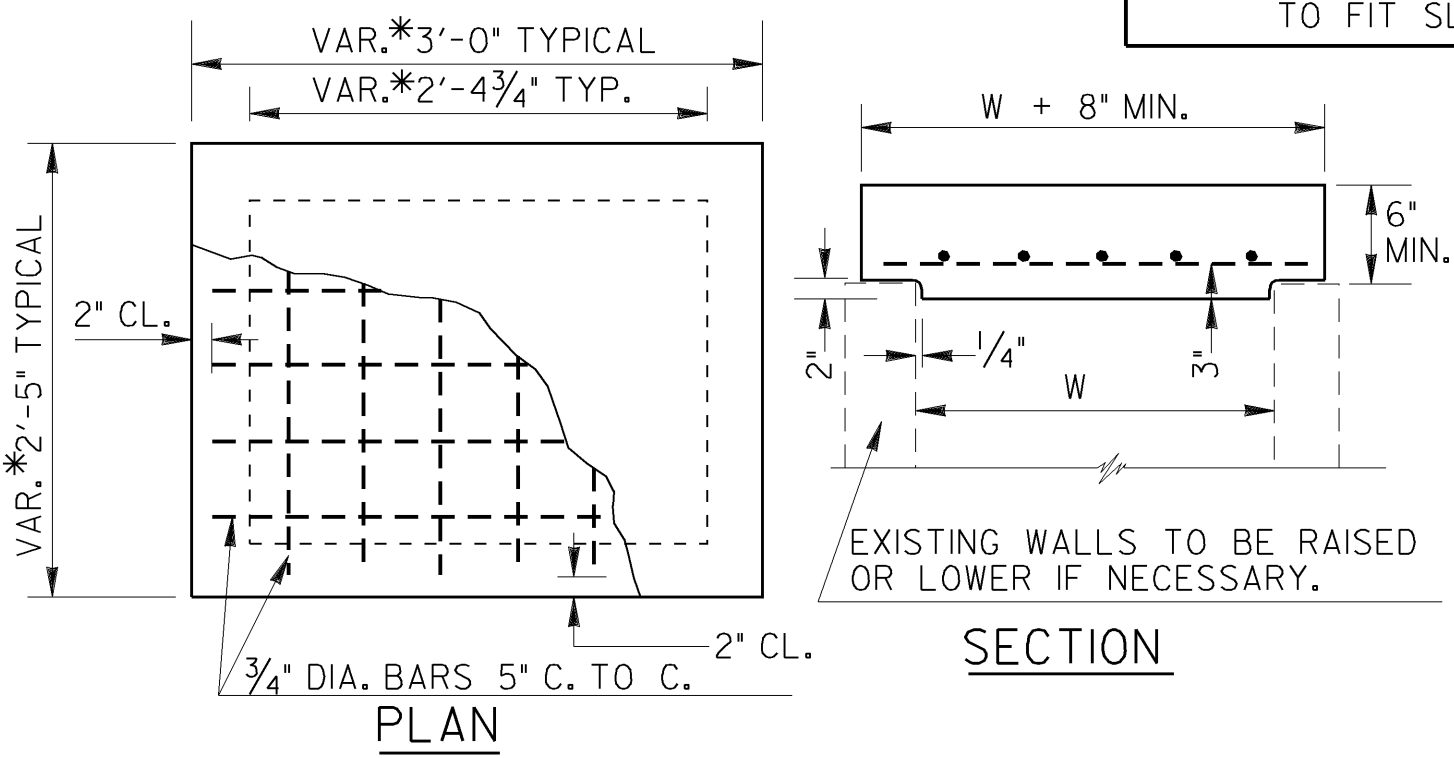


NOTE: SPRING BOX TO BE CONSTRUCTED OF CLASS "A" CONCRETE.
*DRAIN PIPE SHALL BE 6" PERFORATED UNDERDRAIN PIPE, EXCEPT WHERE OTHERWISE SPECIFIED.
(2" GALV. PIPE USED ONLY IN SPECIAL CASES.) PAYMENT FOR SPRING BOX INCLUDES 1'-6"
MIN. LENGTH OF DRAIN PIPE. ANY ADDITIONAL PIPE REQUIRED SHALL BE PAID FOR SEPARATELY.

DETAILS OF CATCH BASIN OR DROP INLET CONNECTION TO CONCRETE BOX CULVERT



DETAILS FOR CAPPING EXISTING
DROP INLET WITH CONCRETE COVER



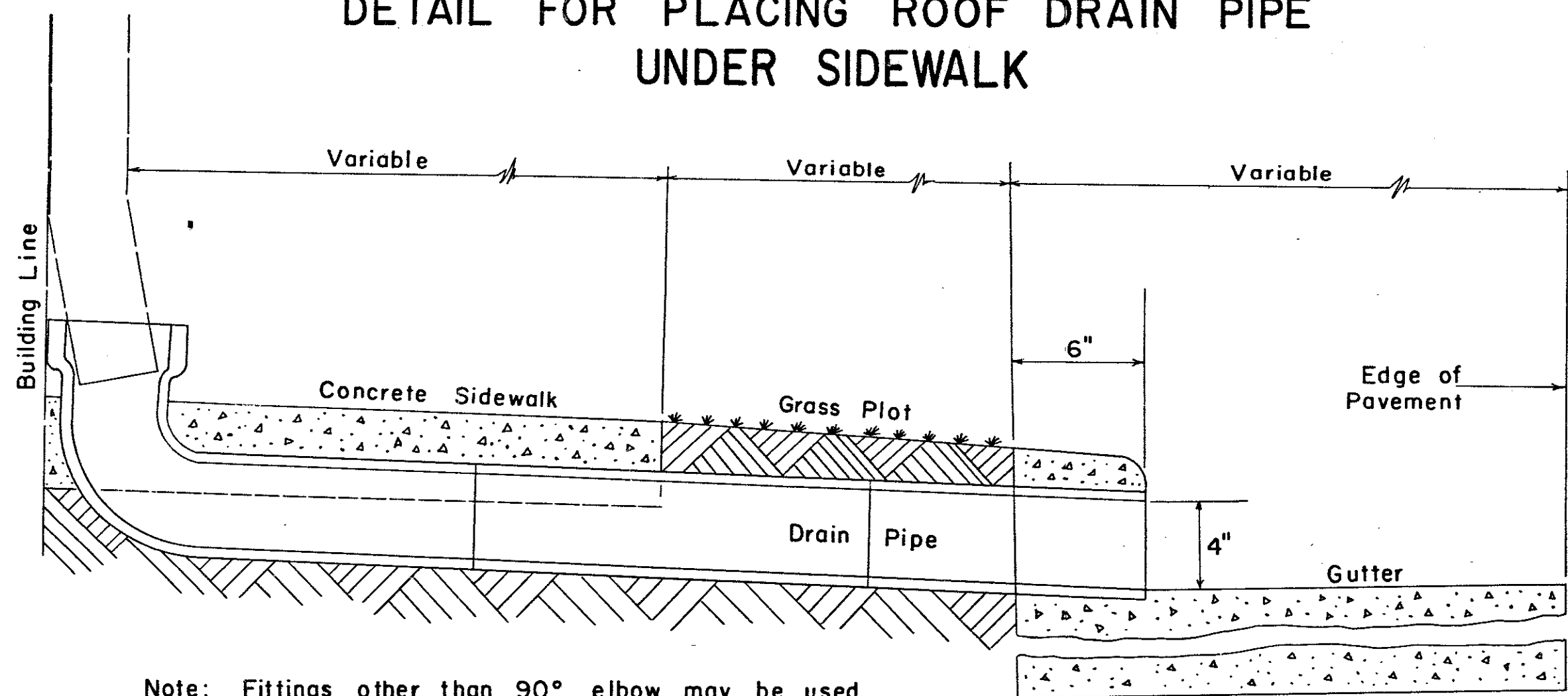
NOTE:
CONCRETE COVER SHOWN IS FOR USE IN CAPPING MINOR STRUCTURE WHERE
CONVERSION FROM DROP INLET TO JUNCTION BOX IS DESIRED, SEE STD. 1011A
REINFORCED CONCRETE COVER FOR CONVERSION TO MANHOLE.

*DIMENSIONS INDICATED ABOVE ARE TYPICAL FOR APPLICATION WITH STD. 1019A
DROP INLET AND WILL VARY ACCORDING TO STRUCTURE; HOWEVER, NO INSIDE
DIMENSION SHOULD EXCEED 4'-0" WITHOUT STRUCTURAL REVIEW. INLET
DIMENSIONS SHOULD BE DETERMINED PRIOR TO CASTING CONC. COVER.

NOTE: IF STRUCTURE IS TO BE UNDER TRAFFIC AND DOES NOT HAVE ONE FT. MIN.
CLEARANCE TO SUBBASE, THE SLAB THICKNESS SHALL BE INCREASED
BY 4" AND THE REBARS SIZE INCREASES FROM 3/4" DIA. TO 1" DIA.

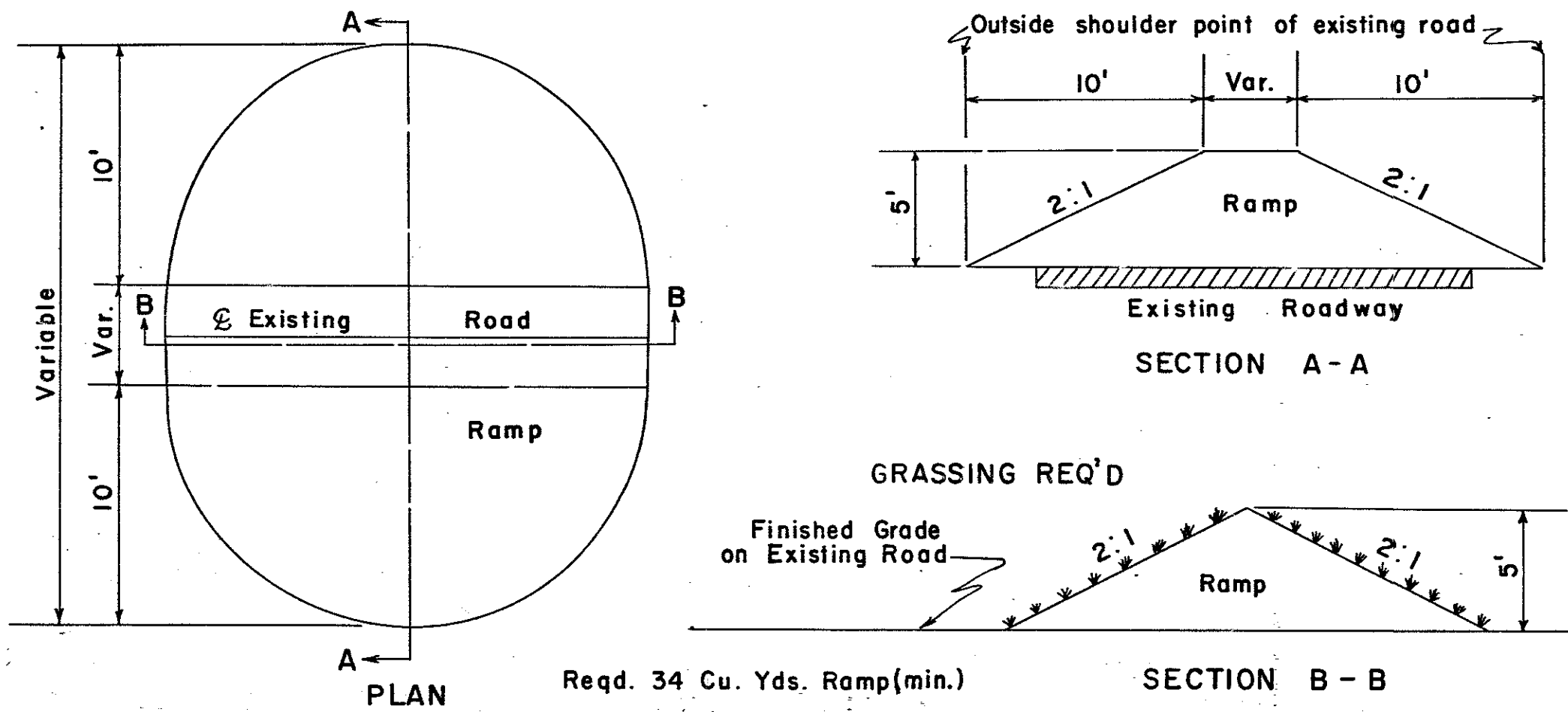
DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA			
STANDARD			
DETAILS OF: CATCH BASIN MODIFIED FOR DOUBLE GRATE, DROP INLET MODIFIED FOR DOUBLE GRATE, CONCRETE SPRING BOX, CONCRETE STEPS, CATCH BASIN OR DROP INLET CONNECTION TO CONCRETE BOX CULVERT CAPPING EXISTING DROP INLET			
NO SCALE:		REV. & REDR. DECEMBER, 1982	
REV. & R.M.U. (SUBMITTED) REDR. TRA. G.M.E. (APPROVED) CHK. R.K.C. CHIEF ENGINEER		STATE ROAD & AIRPORT DESIGN ENGR.	
G.J.P. R.M.U. R.M.U. BY		NUMBER 9031L SHEET 2 OF 2	

DETAIL FOR PLACING ROOF DRAIN PIPE UNDER SIDEWALK



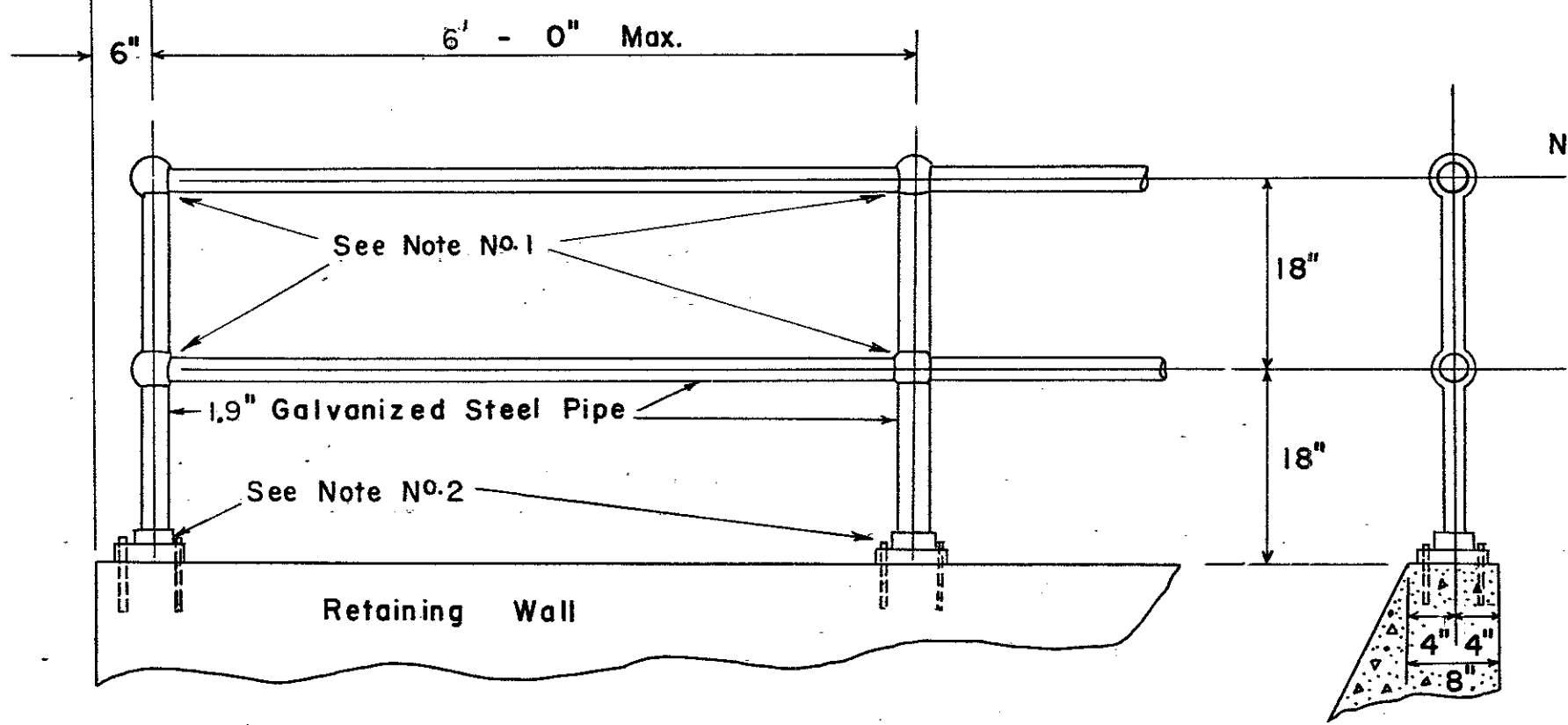
Note: Fittings other than 90° elbow may be used to satisfy other conditions.

DETAIL OF RAMP TYPE BARRICADE



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

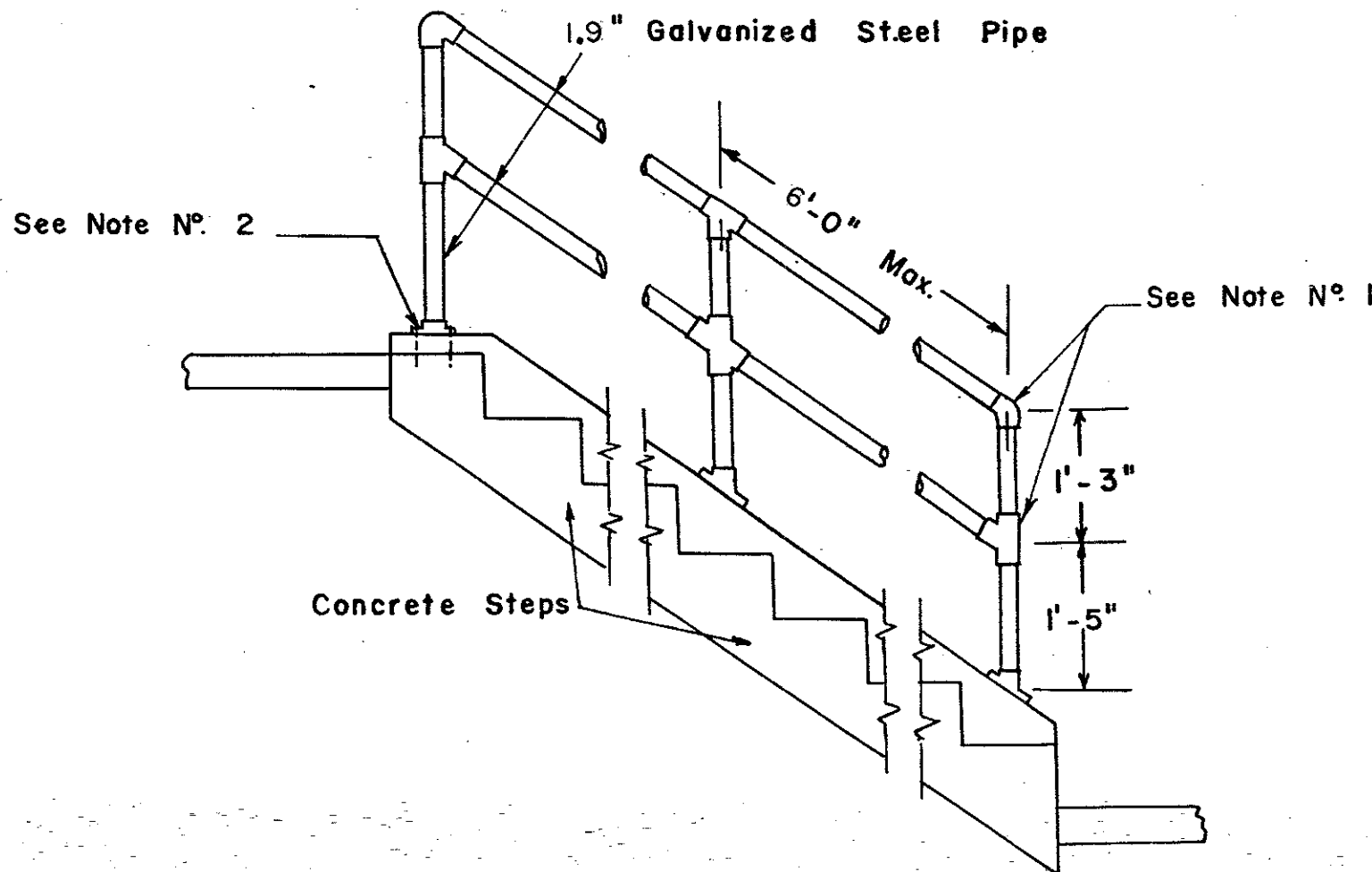
DETAIL OF PIPE HANDRAIL FOR RETAINING WALL



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

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

DETAIL OF PIPE HANDRAIL FOR CONCRETE STEPS



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

NOTES FOR PIPE HANDRAILING

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

DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA STANDARD CONSTRUCTION DETAILS

PLACING ROOF DRAIN PIPE UNDER SIDEWALK
RAMP TYPE BARRICADE

PIPE HANDRAIL FOR RETAINING WALL
PIPE HANDRAIL FOR CONCRETE STEPS

NO SCALE REVISED: FEB., 1966

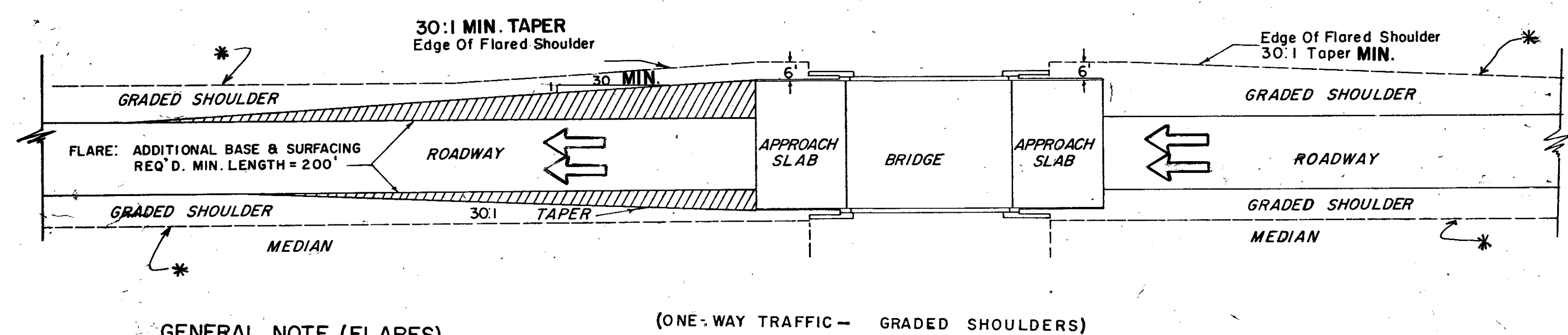
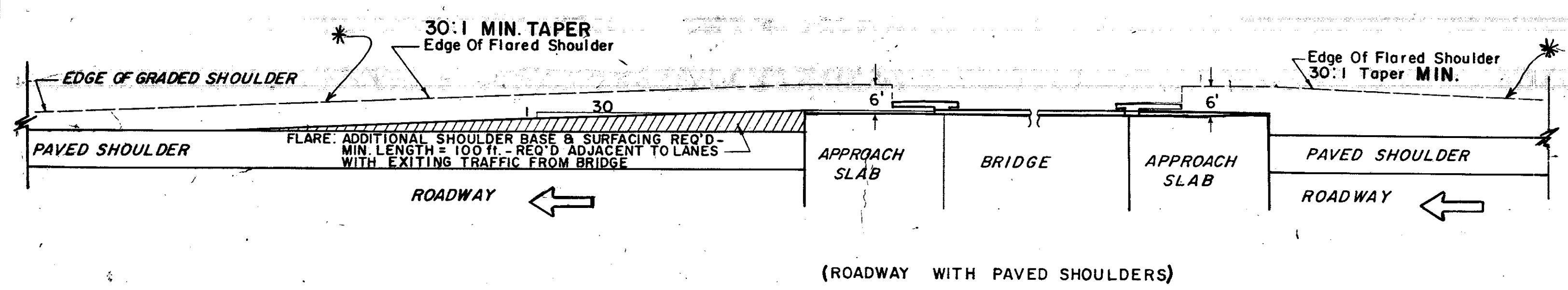
DESIGNED: *[Signature]*
DRAWN: A.V.S.
TRACED: A.V.S.
CHECKED: R.B.S.

SUBMITTED *[Signature]*
STATE ROAD DESIGN ENGINEER
APPROVED *[Signature]*
STATE HIGHWAY ENGINEER

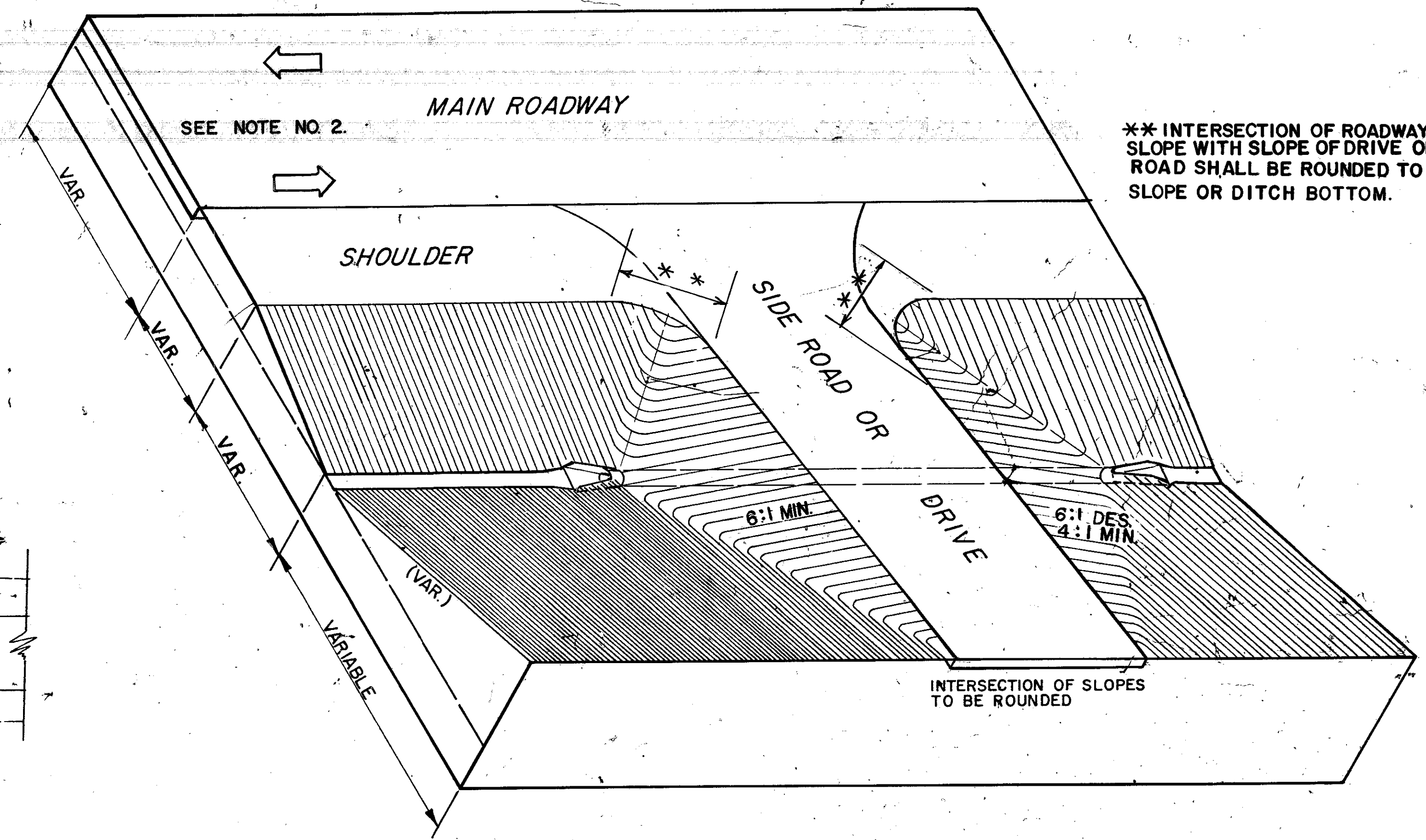
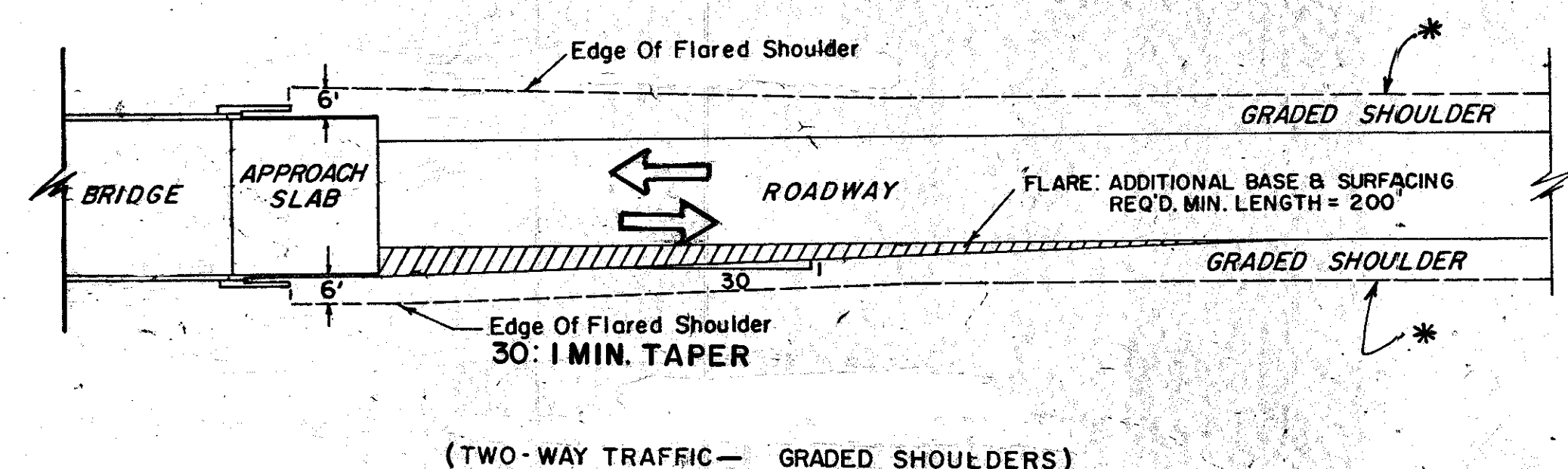
NUMBER
9031R

ISOMETRIC VIEW OF SIDE ROAD OR DRIVE

FLARE DETAILS AT BRIDGE ENDS



GENERAL NOTE (FLARES)
EARTHWORK QUANTITIES SHALL REFLECT
ADDITIONAL MATERIAL REQUIRED FOR
CONSTRUCTION OF FLARED SHOULDERS.



** INTERSECTION OF ROADWAY
SLOPE WITH SLOPE OF DRIVE OR SIDE
ROAD SHALL BE ROUNDED TO TOE OF
SLOPE OR DITCH BOTTOM.

NOTES:

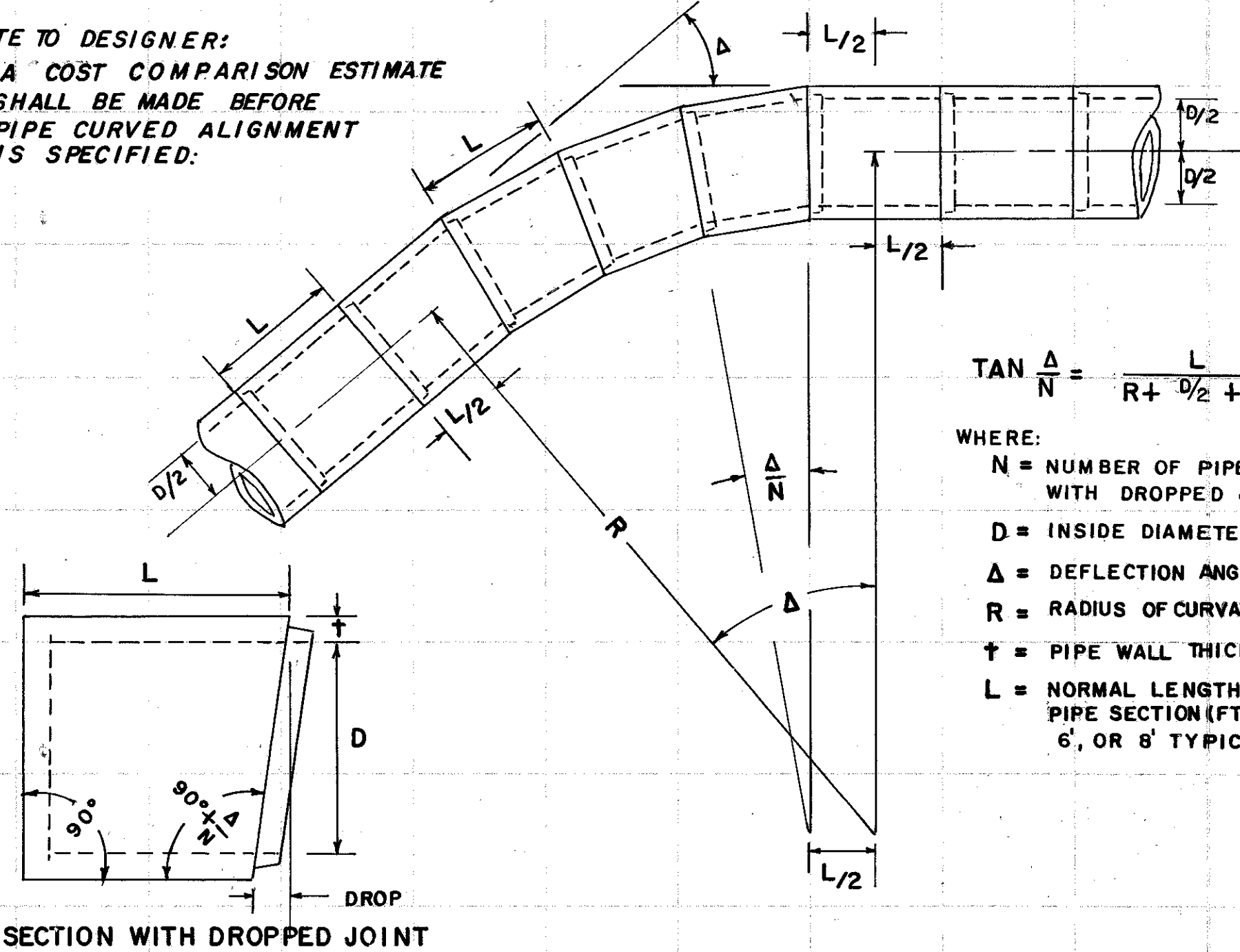
1. ENDS OF SIDE DRAINS WHICH FALL INSIDE THE CLEAR ZONE WIDTH SHALL REQUIRE SAFETY END SECTIONS FOR SIDE DRAIN PIPE.
2. SIDE SLOPES ON THE APPROACH SIDE OF TRAFFIC SHALL NOT BE STEEPER THAN 6:1.
3. SIDE DRAIN END SECTIONS SHOULD FIT THE SIDE SLOPE TERRAIN AND SHOULD NOT PROTRUDE.
4. SIDE SLOPES FROM SIDE ROAD OR DRIVE ALSO APPLY TO FILL SECTIONS.

* WHERE THE WIDENED ROADWAY SHOULDER FOR GUARDRAIL GIVES THE SAME OFFSET AS AT THE APPROACH SLAB, THIS LINE REMAINS STRAIGHT TO THE BRIDGE END.
(ALSO, SEE GUARDRAIL STANDARDS OR DETAILS FOR ADDITIONAL FLARE AT ANCHORAGES.)

DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA STANDARD	
ISOMETRIC VIEW OF SIDE ROAD OR DRIVE FLARE DETAILS AT BRIDGE ENDS	
NO SCALE DESIGNED: RBS DRAWN: AVS TRACED: AVS CHECKED: RBS	SUBMITTED APPROVED STATE HIGHWAY ENGINEER
AUG. 1958 NUMBER 9031T	

PIPE CURVED ALIGNMENT USING SECTIONS WITH DROPPED JOINTS

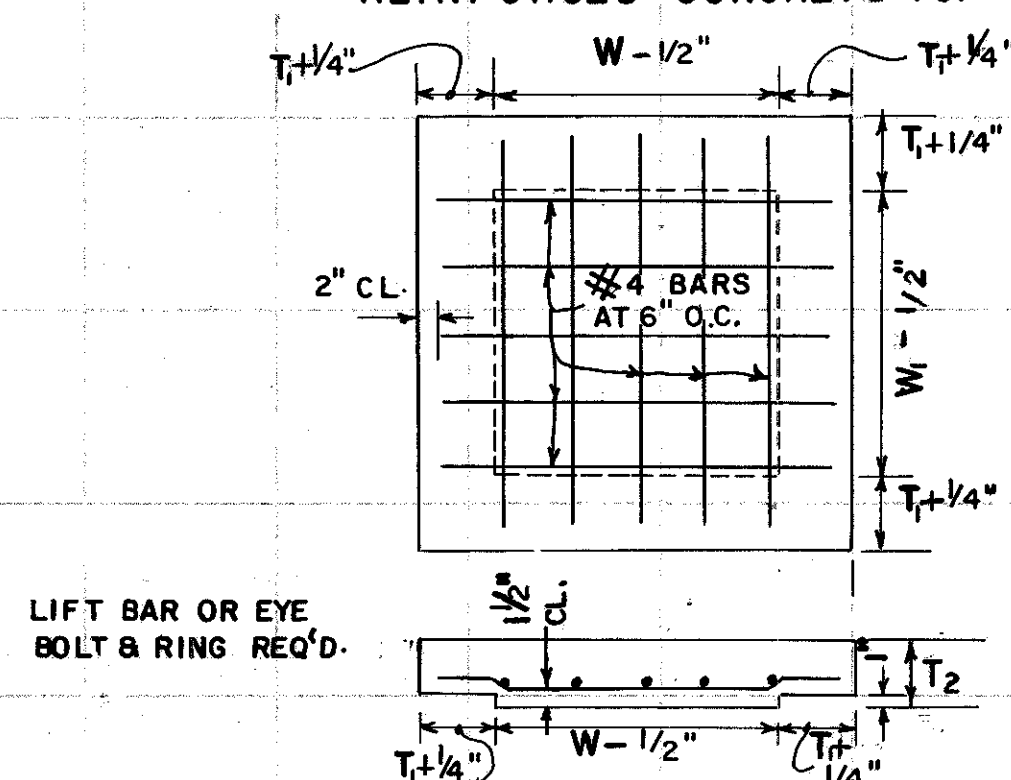
NOTE TO DESIGNER:
A COST COMPARISON ESTIMATE
SHALL BE MADE BEFORE
PIPE CURVED ALIGNMENT
IS SPECIFIED.



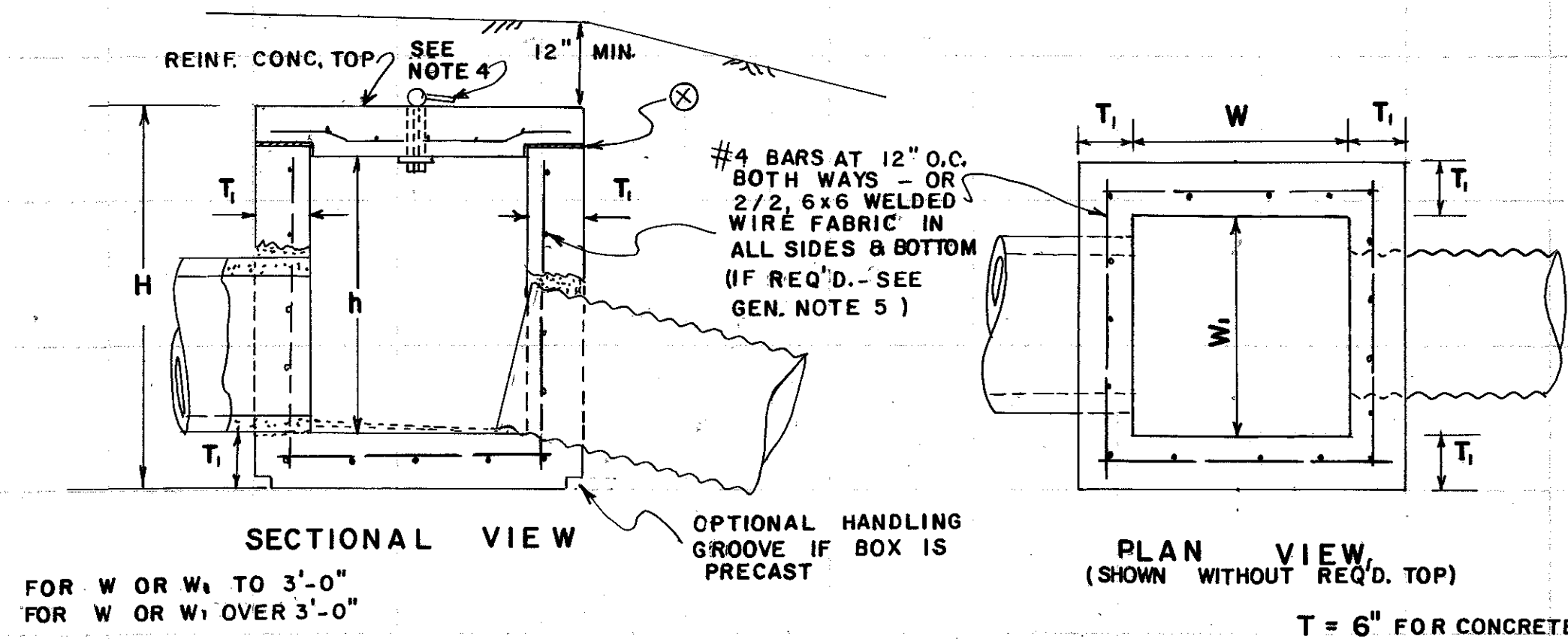
NOTES FOR PIPE CURVED ALIGNMENT:

- 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)

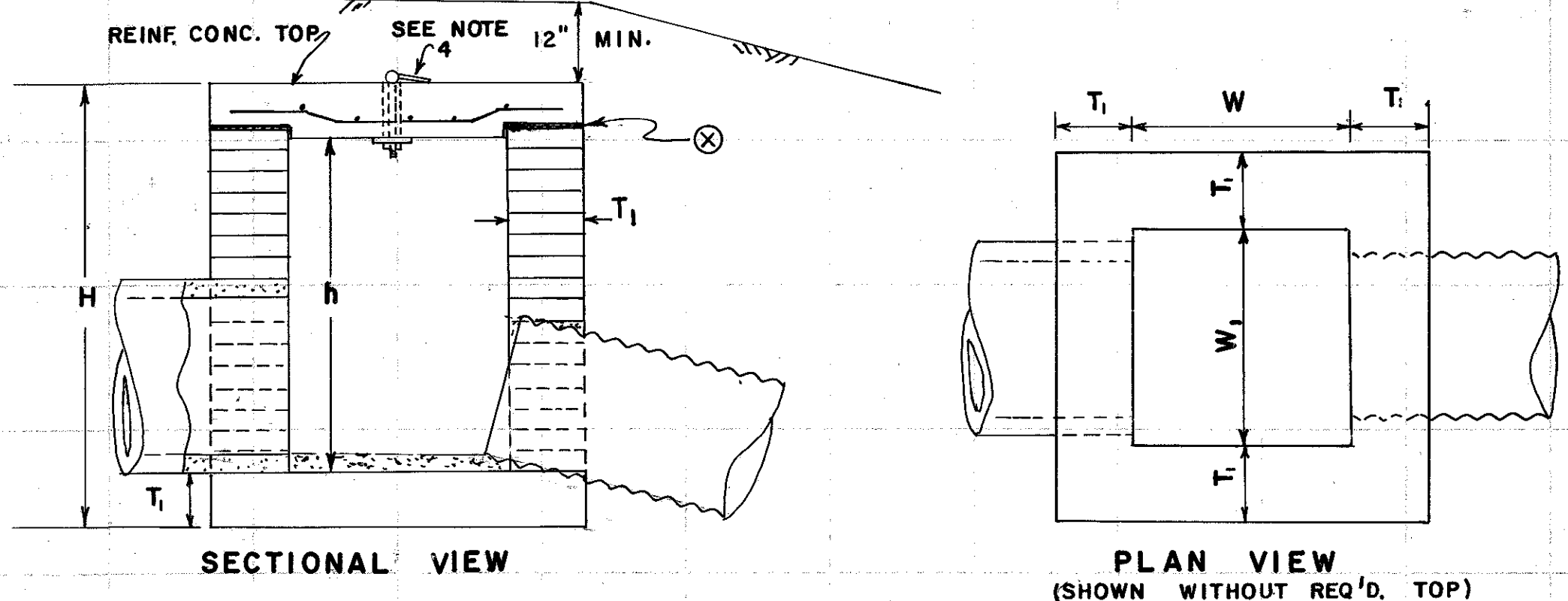


PIPE SIZE	MIN. W OR W	MIN. h	MIN. H
15"	2'-0"	1'-9"	2'-9"
18"	2'-3"	2'-1"	3'-1"
24"	2'-10"	2'-6"	3'-8"
30"	3'-5"	3'-3"	4'-3"
36"	4'-0"	3'-10"	4'-9"
42"	4'-7"	4'-5"	5'-5"
48"	5'-2"	5'-0"	6'-0"

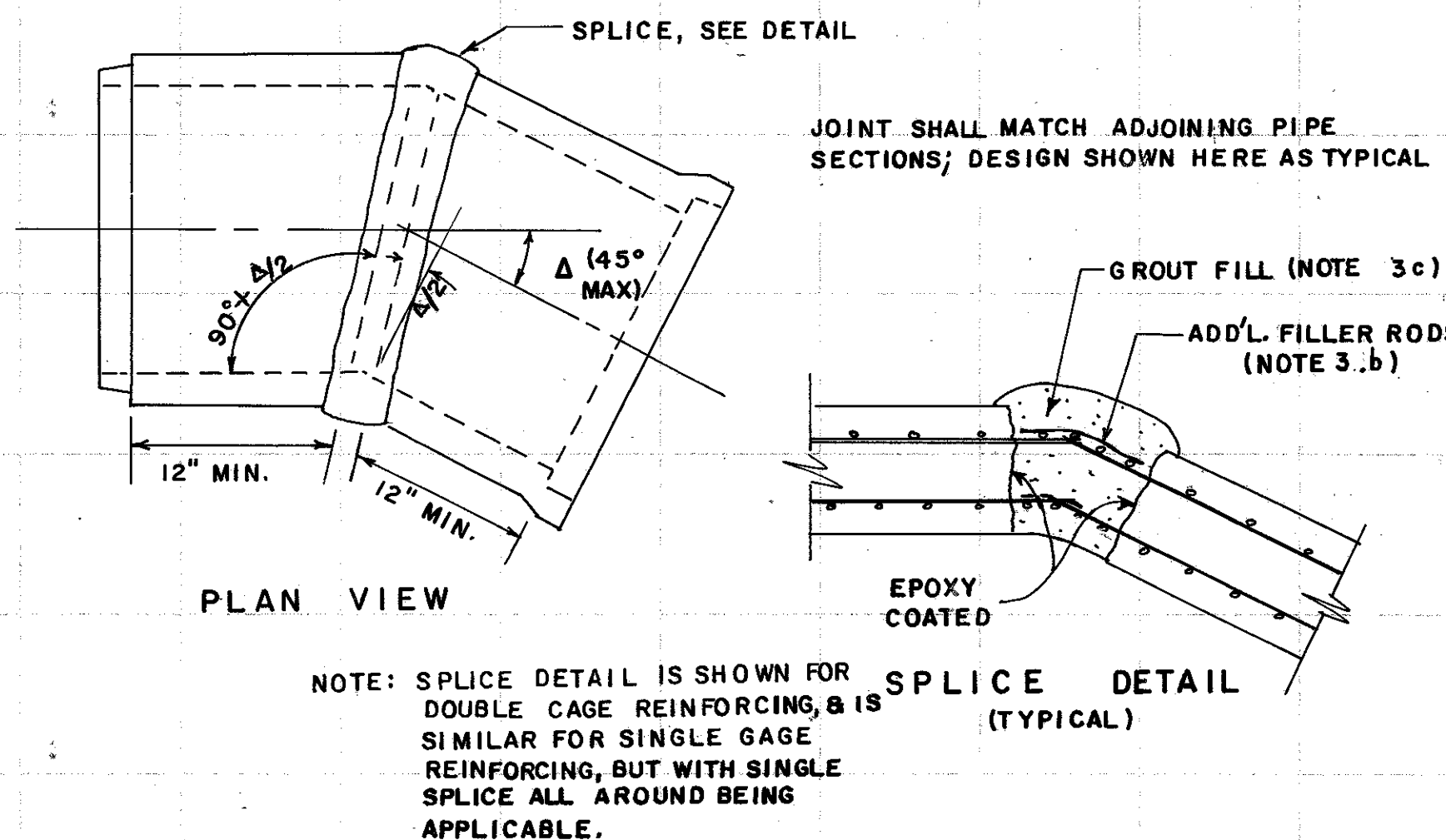
SEE GEN. NOTE NO.3

DETAILS OF BRICK JUNCTION BOX

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



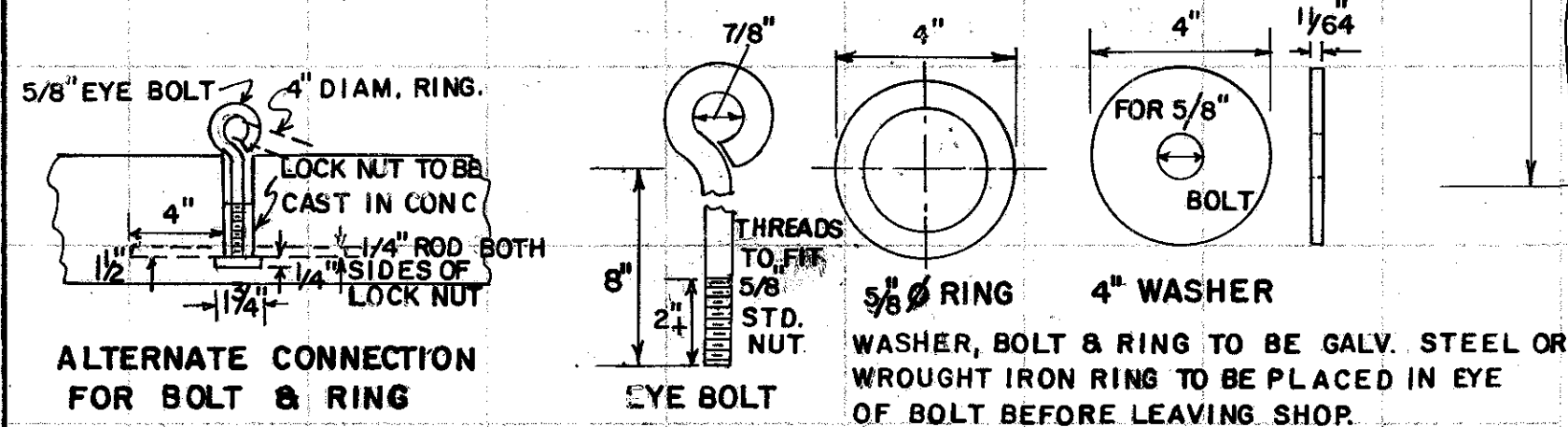
PIPE ELBOW SECTION (PRE-FABRICATED)



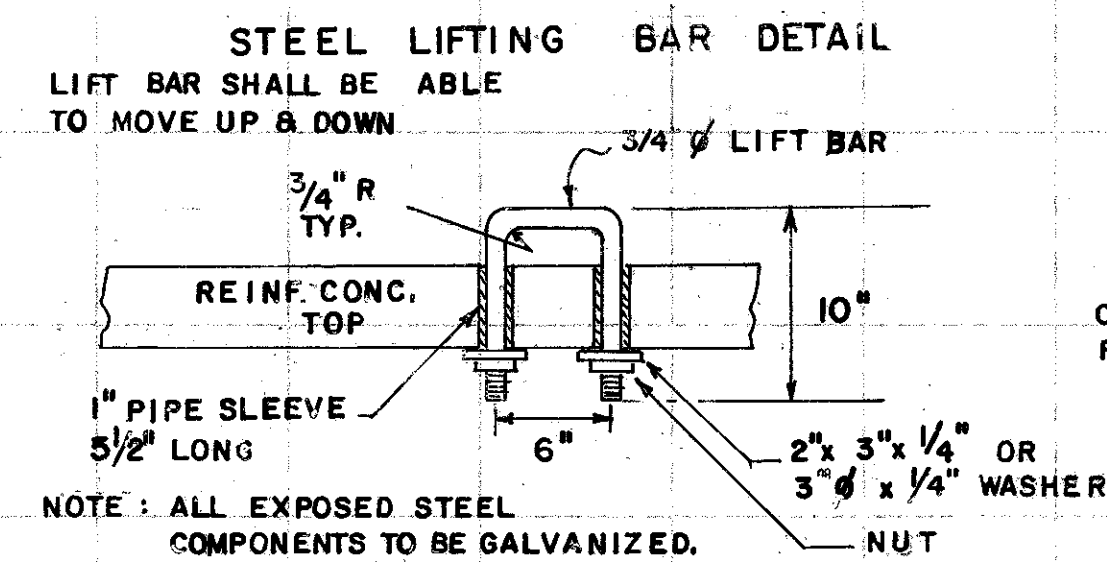
NOTES FOR PIPE ELBOW:

- 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.

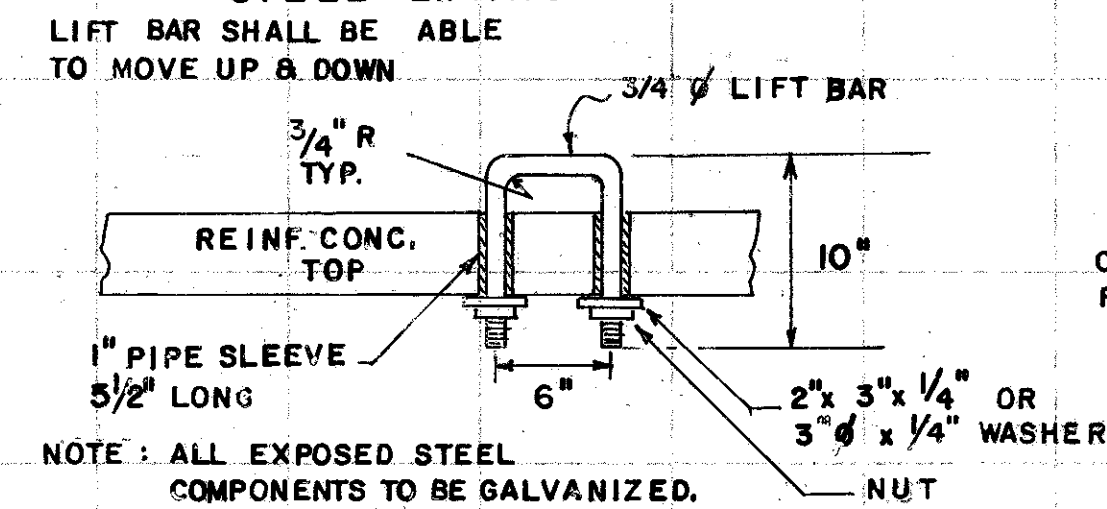
BOLT, RING & WASHER DETAILS



ALTERNATE CONNECTION FOR BOLT & RING



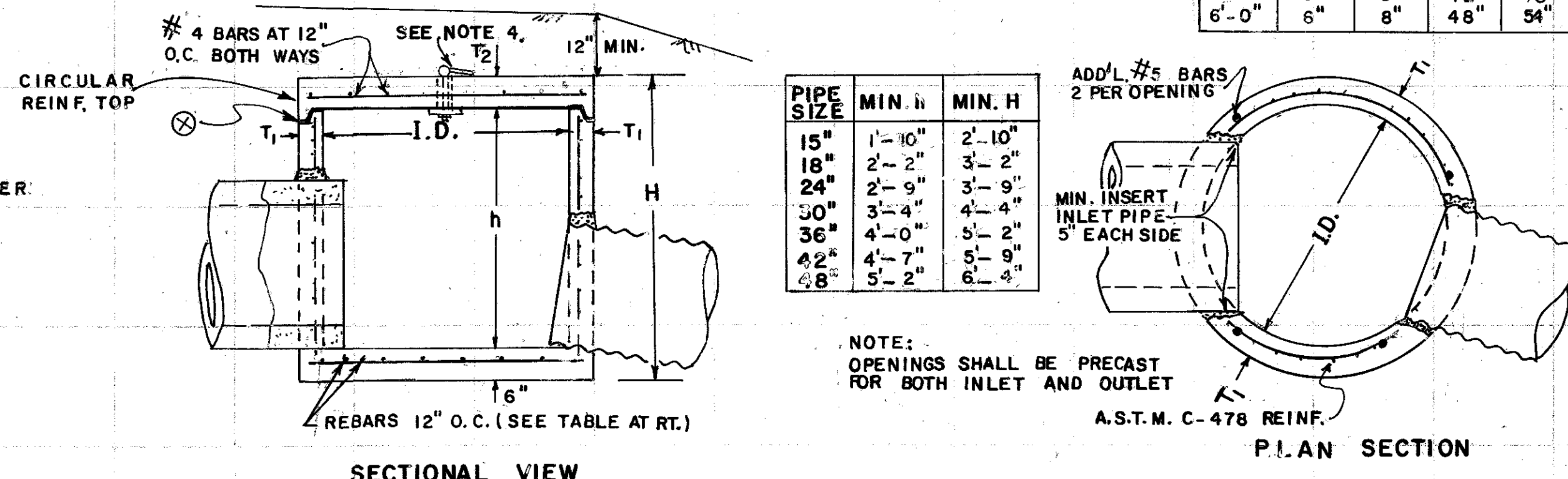
STEEL LIFTING BAR DETAIL



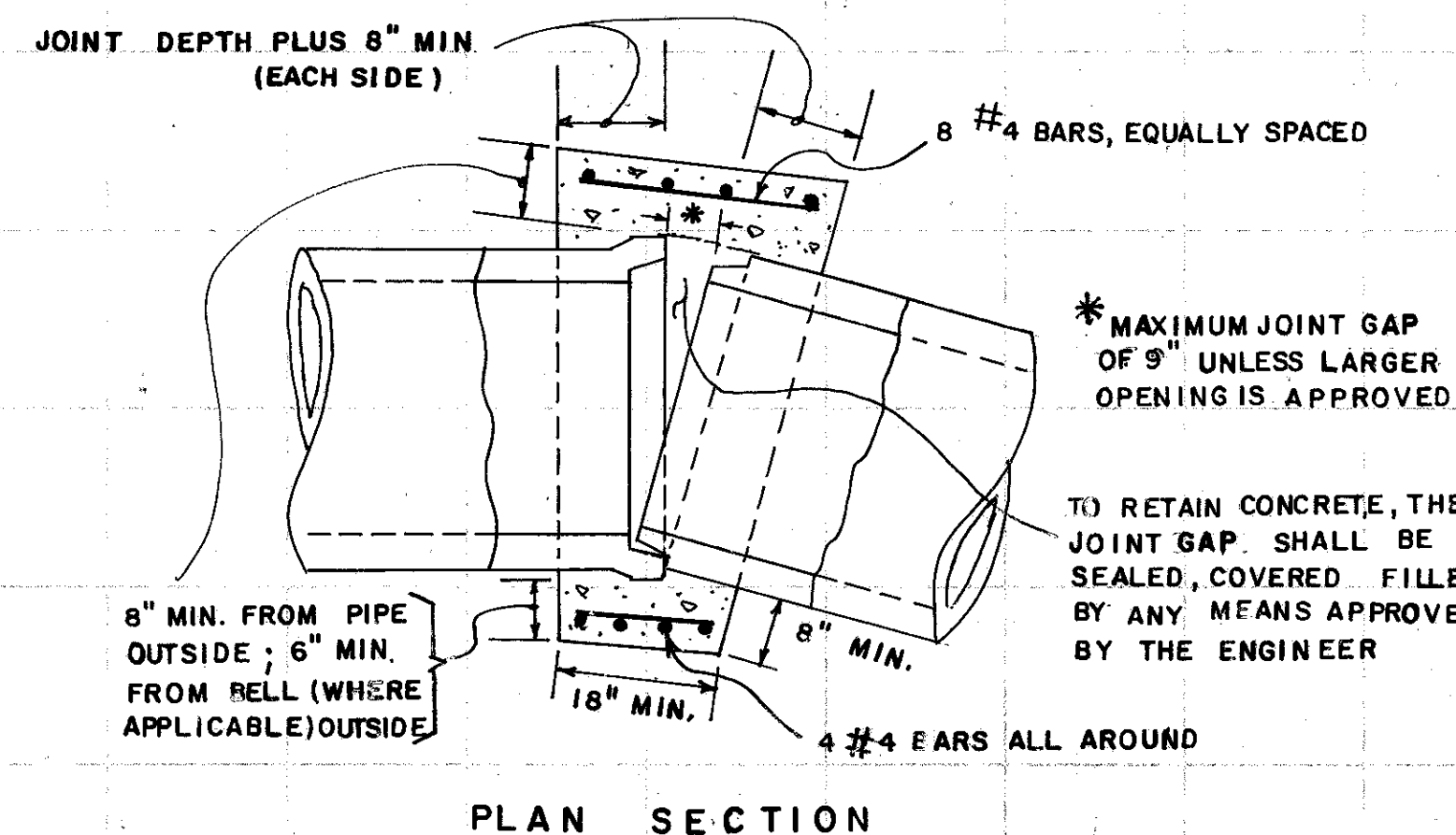
DETAILS OF CIRCULAR PRECAST JUNCTION BOX (REINFORCING AND DESIGN SHALL COMPLY WITH A.S.T.M. C-478 EXCEPT AS OTHERWISE SHOWN. MATERIALS SHALL COMPLY WITH GA. STD. SPECIFICATIONS FOR PRECAST MANHOLES)

I.D.	T1 (MIN.)	T2 (MIN.)	MAX. PIPE CONC. C.M.	REBARS IN BOTTOM
4'-0"	5"	6"	30"	#5
5'-0"	5"	8"	42"	#5
6'-0"	6"	8"	48"	#6

PIPE SIZE	MIN. h	MIN. H
15"	1'-10"	2'-10"
18"	2'-2"	3'-2"
24"	2'-9"	3'-9"
30"	3'-4"	4'-4"
36"	4'-0"	5'-2"
42"	4'-7"	5'-9"
48"	5'-2"	6'-4"



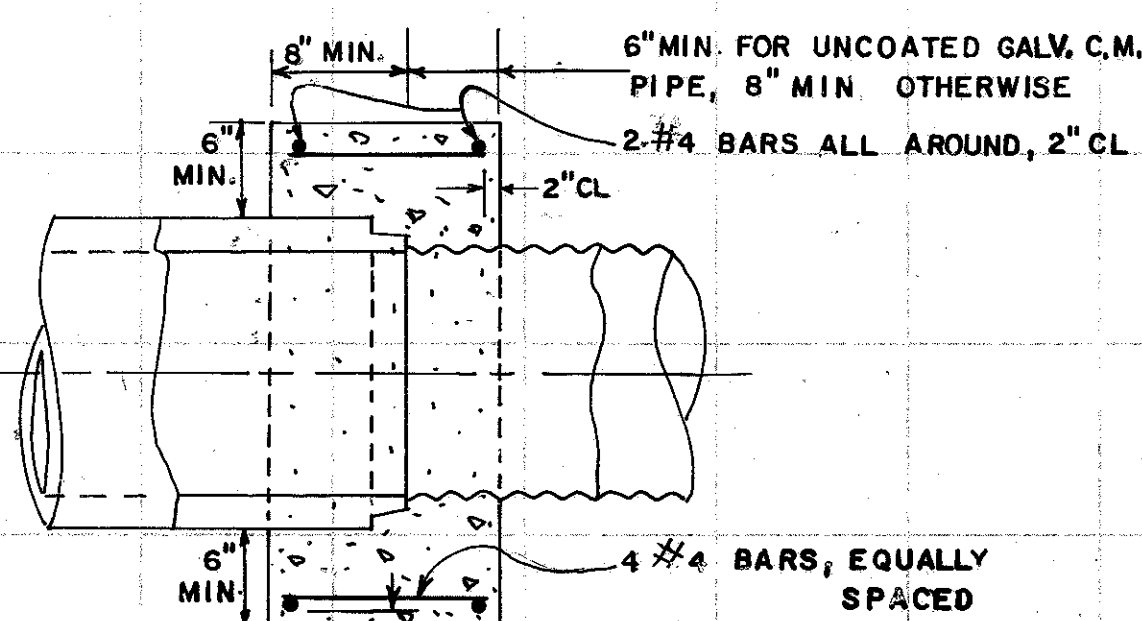
CONCRETE COLLAR FOR DEFLECTING PIPE



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



PLAN OR SIDE SECTION

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.

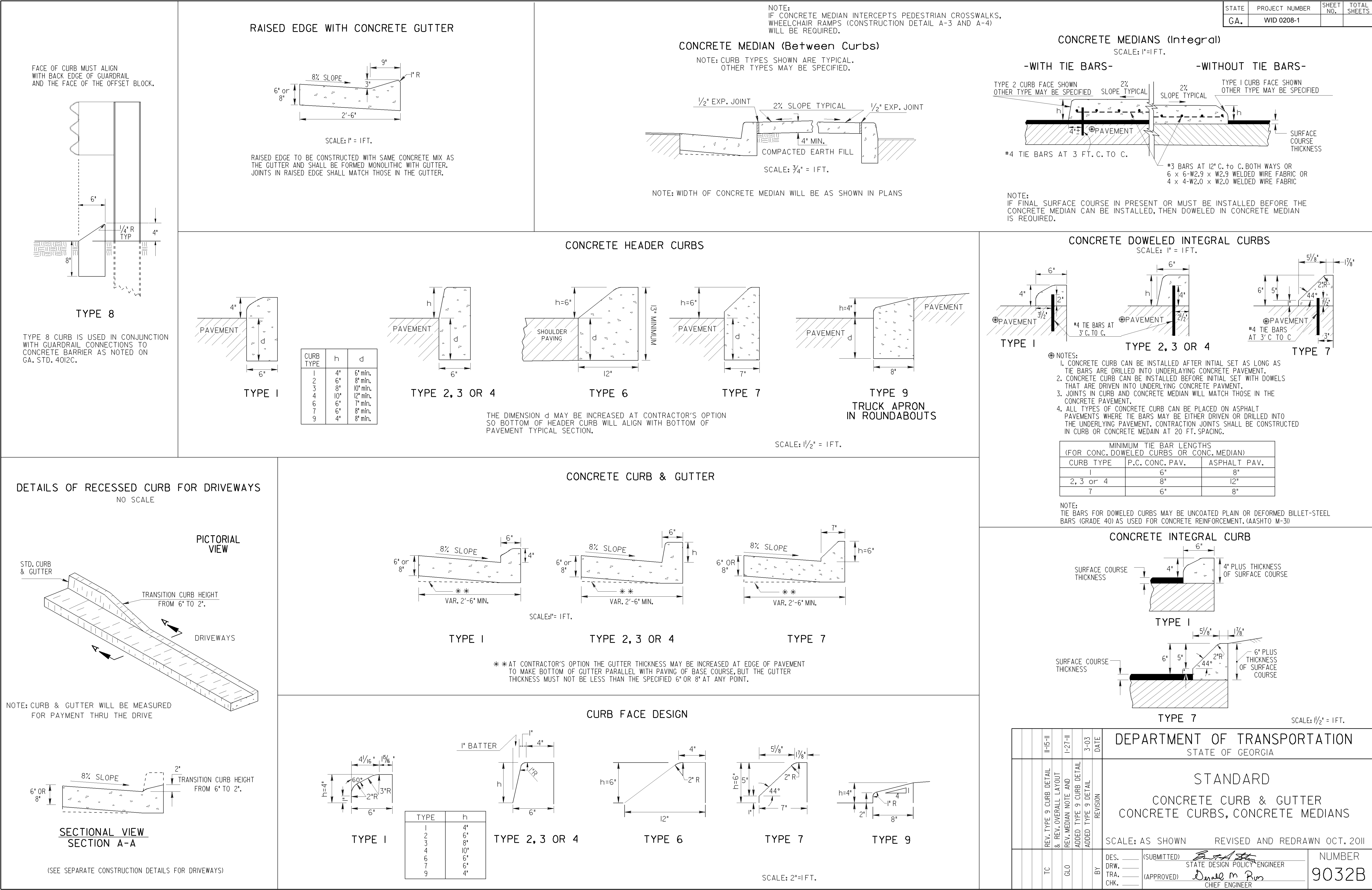
DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA

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



STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	WID 0208-1		

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, RAMPS OR OTHER ENTRANCES TO MAINLINE CONSTRUCTION SHALL REQUIRE W20-1 SIGNS LOCATED AS SHOWN IN THE PLANS, OR AS DIRECTED BY THE ENGINEER.
13. MARKINGS AND/OR SIGNS IN CONFLICT WITH INTERIM TRAFFIC CONTROL SHALL BE REMOVED, RELOCATED OR COVERED; APPLICABLE EXISTING AND INTERIM MARKINGS AND/OR SIGNING SHALL BE MAINTAINED PER SECTION 150.
14. ANY CHANNELIZING DEVICES (DRUMS OR BARRICADES) IN CONFLICT WITH CONCRETE BARRIERS SHALL BE OMITTED.
15. CONTRACTOR SHALL PROVIDE THE NECESSARY TRAFFIC CONTROL DURING THE TIE-IN OPERATION.
16. THE TRAFFIC CONTROL DEVICES SHOWN FOR ANY STAGE CONSTRUCTION SHALL REMAIN IN PLACE AND BE UTILIZED SO LONG AS NECESSARY FOR THE FOLLOWING STAGES AND SHALL BE REMOVED IMMEDIATELY WHEN NO LONGER REQUIRED. THE DEVICES MAY OR MAY NOT BE SHOWN ON THE PLANS FOR THESE FOLLOWING STAGES. REFER TO THE PLAN SHEET FOR THE INITIAL STAGE FOR THESE TRAFFIC CONTROLS.
17. EXISTING GUIDE SIGNS SHALL REMAIN IN PLACE SO LONG AS THEY DO NOT CONFLICT WITH THE CONSTRUCTION OF THIS PROJECT. WHEN IN CONFLICT, THEY SHALL BE RELOCATED ON TEMPORARY POSTS AT THE LOCATION AS DIRECTED BY THE ENGINEER. ANY DISTANCE SHOWN ON THE SIGN SHALL BE ADJUSTED ACCORDINGLY. IF THE SIGNS CANNOT BE RELOCATED, THEN THE SIGN SHALL BE REMOVED AND STORED AT A PLACE DESIGNATED BY THE ENGINEER. IF NEITHER OF THE ABOVE CAN BE DONE, THEN THE CONTRACTOR SHALL PROVIDE INTERIM GUIDE SIGNS AS COVERED IN SECTION 150.
18. (a) ON PROJECTS WITH LOW OR SOFT SHOULDERS, THE CONTRACTOR SHALL ERECT IMMEDIATELY AHEAD OF CONSTRUCTION OPERATIONS "LOW/SOFT SHOULDER" WARNING SIGNS AT THE PROJECT TERMINII, AT INTERVALS NOT TO EXCEED 1 MILE AND IMMEDIATELY PAST EACH CROSSROAD.

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

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
- ▨

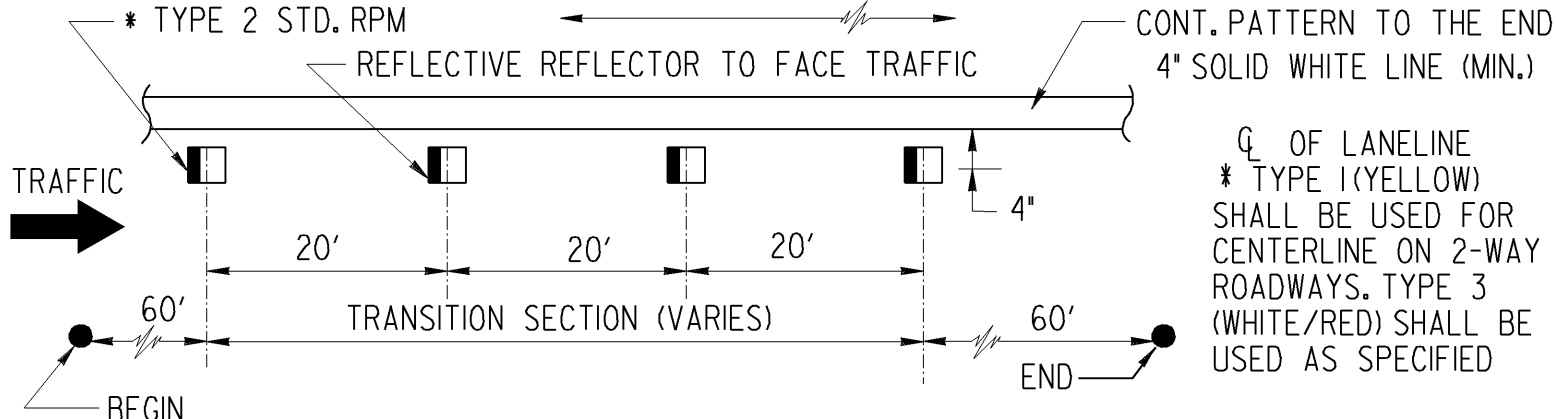
WORK AREA
- ▲

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

TEMPORARY
RAISED PAVEMENT MARKER DETAIL

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



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

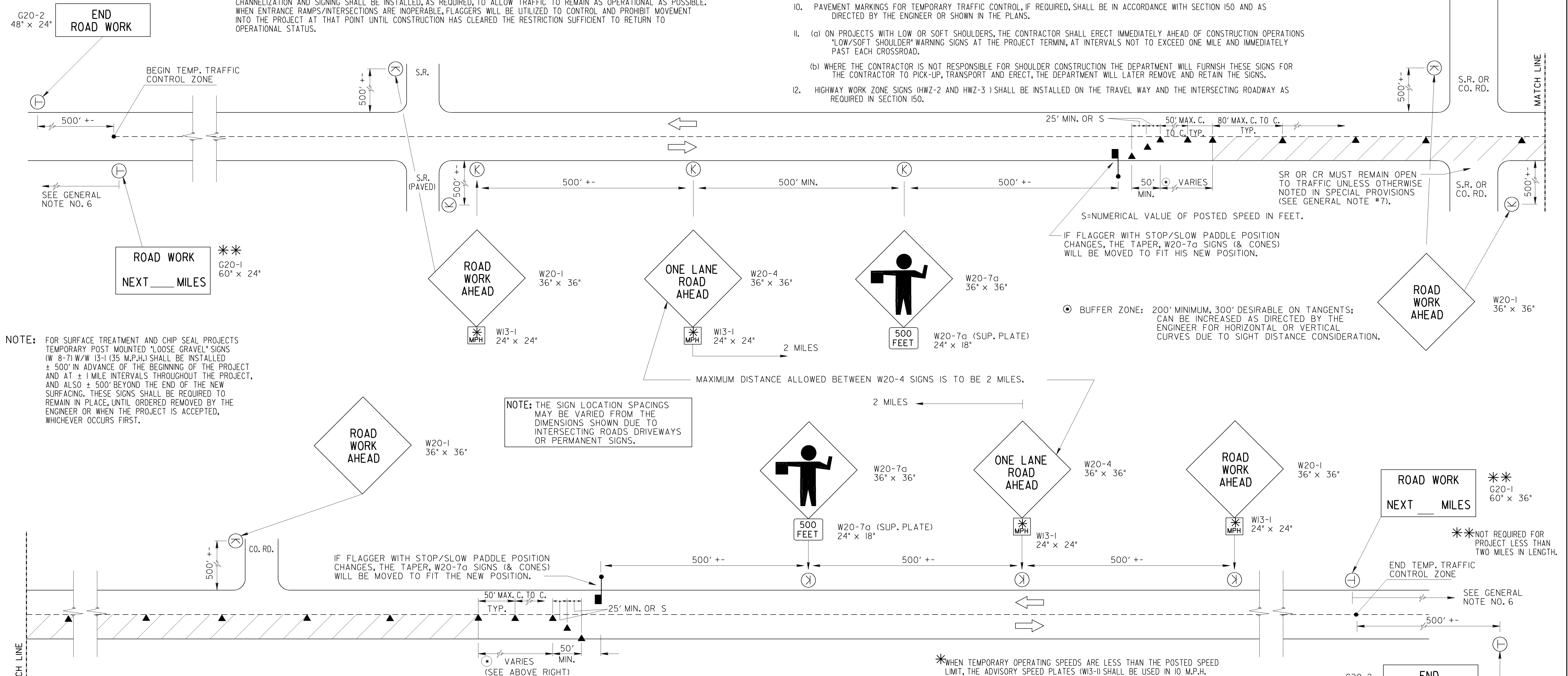
3-30-06		4-24-01		DATE		DEPARTMENT OF TRANSPORTATION	
REVISED GENERAL NOTES AND LEGEND, DELETED TWO DETAILS.		SPEC. BAR. SH. SPEC. REVISION				STATE OF GEORGIA	
GLO		BY				STANDARD TRAFFIC CONTROL GENERAL NOTES, STANDARD LEGEND, MISCELLANEOUS DETAILS	
						NO SCALE	
						AUG., 1999	
						DES. (SUBMITTED)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

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	WID 0208-1		

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.



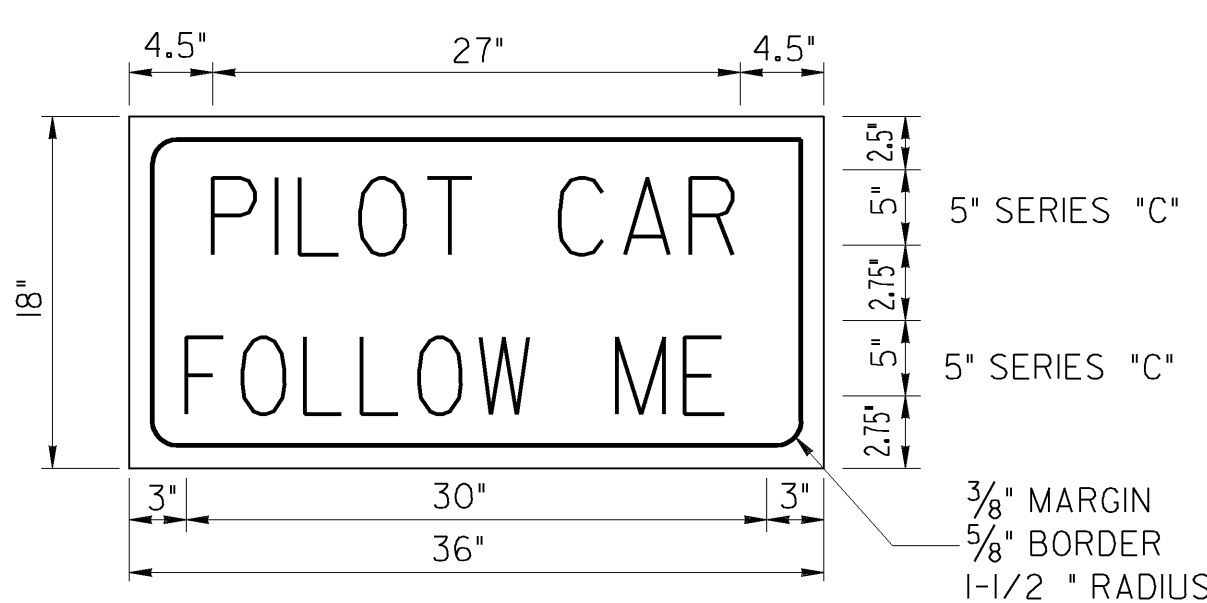
NOTE: FOR SURFACE TREATMENT AND CHIP SEAL PROJECTS TEMPORARY POST MOUNTED "LOOSE GRAVEL" SIGNS (W 8-7) W/W 13-1 (35 M.P.H.) SHALL BE INSTALLED ± 500' IN ADVANCE OF THE BEGINNING OF THE PROJECT AND AT ± 1 MILE INTERVALS THROUGHOUT THE PROJECT, AND ALSO ± 500' BEYOND THE END OF THE NEW SURFACING. THESE 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.

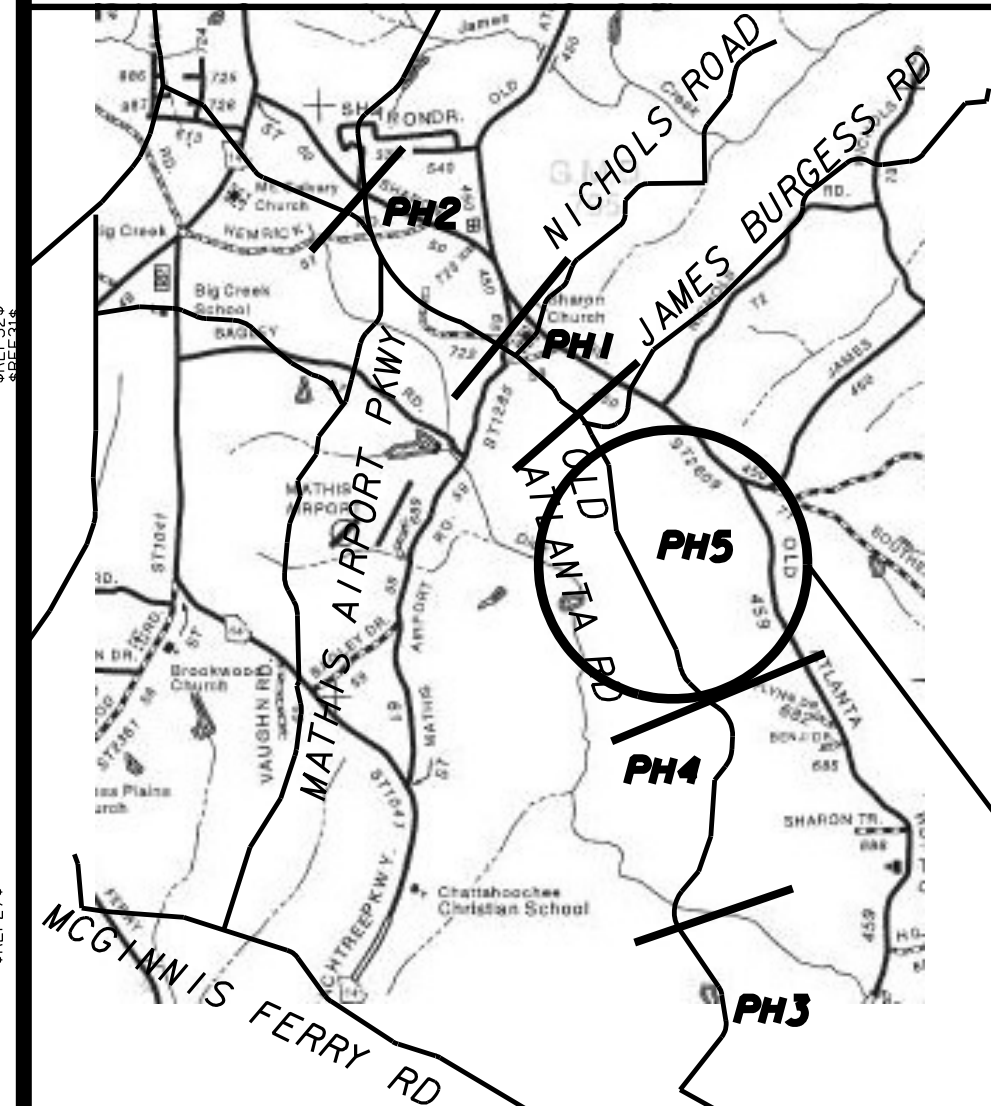
DETAIL OF G20-4 SIGN For Pilot Vehicle
IF REQUIRED OR USED ON PROJECT



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. SIGN		REVISION	
G20-2A TO G20-2.			
GLO		BY	
DES. _____		STATE ROAD & AIRPORT DESIGN ENGINEER	
TRA. _____		(APPROVED) _____	
CHK. _____		CHIEF ENGINEER	
NO SCALE		REV. & REDR. JULY, 1999	
NUMBER		9102	



VICINITY MAP

THIS PROJECT IS IN ENGLISH UNITS
NOTE: THE CO-ORDINATES LISTED ARE GEORGIA WEST ZONE
GRID CO-ORDINATES BASED ON THE GA. STATE PLANE
CO-ORDINATE SYSTEM OF GA WEST.
HORIZONTAL DATUM : NAD 83/94
VERTICAL DATUM : NAVD 1988

MIDPOINT COORDINATE
STATION 221+50.00
N 1488055.20
E 2306519.53
LAT 34.0906660°
LONG -084.1338465°

BEGIN PROJECT
LAT 34.1012413°
LONG -084.1380622°
END PROJECT
LAT 34.0808059°
LONG -084.1274197°

OLD ATLANTA ROAD
STA. 183+56.23 =
JAMES BURGESS ROAD
STA. 10+00.00

BEGIN PROJECT
PN WID 0208-1
STA. 180+00.00
N 1491903.02
E 2305242.15

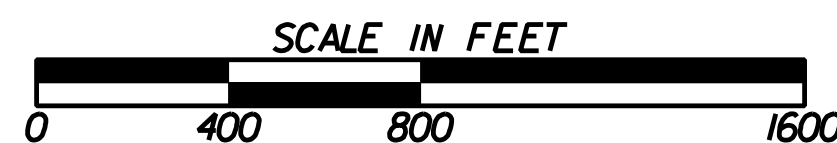
"I certify that this Erosion, Sedimentation, and Pollution Control Plan has been prepared in accordance with part IV GAR 100002."

"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 the 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. GAR 100002."

"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. GAR 100002, 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 locations described herein by myself or my authorized agent, under my supervision."

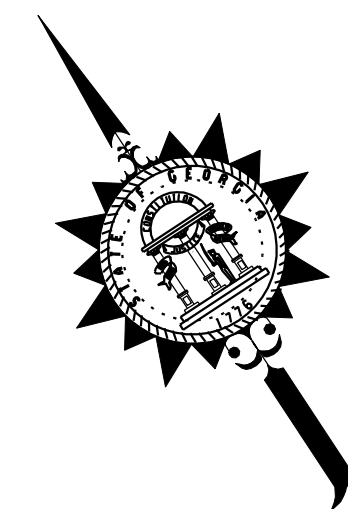
THIS PROJECT IS LOCATED 100% IN FORSYTH COUNTY AND CONGRESSIONAL DISTRICT 09.
PROJECT DESIGNATION : EXEMPT
FUNCTIONAL CLASSIFICATION : MINOR ARTERIAL STREET
COUNTY NO: 117



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 COUNTY OF FORSYTH IN ANY WAY. THE ATTENTION OF BIDDER IS SPECIFICALLY DIRECTED TO SUBSECTIONS 102.04, 102.05, AND 104.03 OF THE SPECIFICATIONS.

FORSYTH COUNTY ENGINEERING DEPARTMENT

EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN OLD ATLANTA ROAD WIDENING FROM SHARON ROAD TO MCGINNIS FERRY ROAD PHASE 5 FORSYTH COUNTY PROJECTS WID 0208-1



PLANS PREPARED BY:



GRESHAM
SMITH AND
PARTNERS

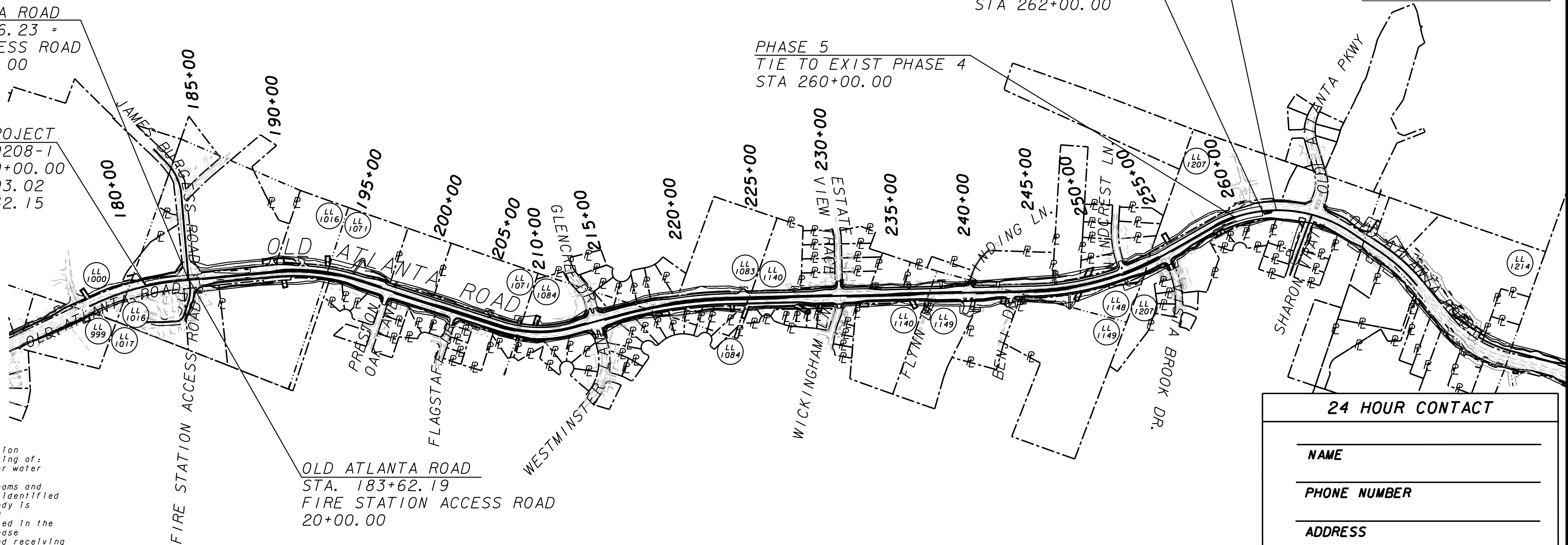
GRESHAM, SMITH & PARTNERS
2325 LAKEVIEW PARKWAY
SUITE 300
ALPHARETTA, GA 30004
PHONE No. (770) 754-0755

PRIMARY PERMITEE:
FORSYTH COUNTY
TIM ALLEN
100 EAST MAIN STREET
SUITE 120
CUMMING, GA 31040
770-781-2165

END PROJECT
PN WID 0208-1 (PHASE 5)
STA 263+00.00

END CONSTRUCTION
STA 262+00.00

PHASE 5
TIE TO EXIST PHASE 4
STA 260+00.00



OLD ATLANTA ROAD
STA. 183+62.19
FIRE STATION ACCESS ROAD
20+00.00

SHEET INDEX	
SHEET NO.	DESCRIPTION
50-01	COVER SHEET
51-01 TO 51-06	EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN GENERAL NOTES
52-01 TO 52-06	EROSION CONTROL LEGEND AND UNIFORM CODE SHEETS
53-01 TO 53-03	DRAINAGE AREA MAP
54-01 TO 54-51	EROSION CONTROL PLANS
55-01	EROSION CONTROL WATERSHED MAP & SITE MONITORING LOCATION
56-01 TO 56-08	EROSION CONTROL CONSTRUCTION STANDARDS AND DETAILS

SUBMITTED BY:

SARAH E. WORACHEK, P.E.
LEVEL 11 CERTIFIED DESIGN
GSWCC# 0000068610
EXPIRES: 5/22/16

PLANS COMPLETED DATE: FEBRUARY 27, 2015

REVISION DATE	SHEET NUMBERS	SIGNATURE	GSWCC LEV11 CERT NUM	REVISION REQ BY

24 HOUR CONTACT

NAME

PHONE NUMBER

ADDRESS

EMAIL

CONTRACTOR SHALL COMPLETE INFORMATION IN THIS BOX.

\$DATE\$

\$USER

\$TIME\$

\$TBL\$

\$PRF\$

\$DCN\$

COUNTY

FORSYTH

PROJECT NUMBER

WID 0208-1

SHEET NO.

TOTAL SHEETS

Date: July 21,2014

ESPCP GENERAL NOTES:

The escape of sediment from the site shall be prevented by the installation of erosion and sediment control measures and practices prior to, or concurrent with, land disturbing activities.

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.

PLAN ALTERATIONS

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

The Contractor, the Certified Design Professional and the WECS shall carefully evaluate this plan prior to commencing land disturbing activities. A major modification or deletion of structural BMP's with a hydraulic component requires a formal revision of the ESPCP and the signature of a GSWCC level-II-certified design professional. Additional BMP's may be added per Special Provision 161 - Control of Soil Erosion and Sedimentation.

TEMPORARY MULCHING

EPD General Permit GAR 100002 states that **any disturbed area where construction activities have temporarily or permanently ceased shall be stabilized within 14 days of such cessation as soon as practicable with a suitable material listed in Standard Specification (or Special Provision) Sections 163.700, or 711.** However, in special cases, the Project Engineer may require the contractor to perform stabilization more often than 14 days.

VEGETATION AND PLANTING SCHEDULE

All temporary and permanent vegetative practices including plant species, planting dates, seeding fertilizer, lime and mulching rates for this project can be found in section 700 of the current edition of the Forsyth County's specifications and other applicable contract documents, special provisions, or landscaping plans.

SITE STABILIZATION AND BMP MAINTENANCE MEASURES

See the Departments Standard Specifications (or Special Provisions) 161, 163, 165, 700, 711, and other contract documents for stabilization and maintenance measures.

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.**

POST-CONSTRUCTION BMP'S FOR STORMWATER MANAGEMENT

All permanent, post-construction BMP's are shown in the construction plans and in the ESPCP plan. The post-construction BMP's for this project will consist of vegetation, rip-rap at pipe outlets for velocity dissipation, outlet stabilization, and slope stabilization with matting. The post-construction BMP's will provide permanent stabilization of the site and prevent accelerated transportation of sediment and pollutants into receiving waters.

PETROLEUM STORAGE, SPILLS AND LEAKS

The plans expressly delegate the responsibility of 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 in the work. 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 this 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 BMP's needed for on-site storage and spill prevention for petroleum products. This plan shall be prepared by a Certified Design Professional as required by GAR100002 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.

SOIL SERIES INFORMATION

A project-specific soil survey and geotechnical investigation was performed for this project and can be made available upon request. Soil characteristics have been given full consideration in the hydrologic analysis, the design of channels and linings, selection of temporary BMP's, design of energy dissipaters, and in the selection of permanent vegetation and fertilizers.

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 AOI	Percent of AOI
Aa	Alluvial land, poorly drained	Slight	Alluvial land (100%)		9.3	14.10%
Ab	Alluvial land, moderately well drained	Slight	Alluvial land (100%)		1.6	2.40%
CaD3	Cecil clay loam, severely eroded sloping phase	Slight	Cecil (100%)		16.1	24.20%
CaE3	Cecil clay loam, severely eroded moderately steep phase	Moderate	Cecil (100%)	Slope erodibility (0.50)	7.8	11.70%
CbE	Cecil fine sandy loam, moderately steep phase	Moderate	Cecil (100%)	Slope erodibility (0.50)	4.7	7.20%
CcB2	Cecil sandy loam, eroded very gently sloping phase	Slight	Cecil (100%)		0	0.00%
CcC2	Cecil sandy loam, eroded gently sloping phase	Slight	Cecil (100%)		4.3	6.40%
CcD	Cecil sandy loam, sloping phase	Slight	Cecil (100%)		9.1	13.80%
Ce	Congaree fine sandy loam	Slight	Congaree (100%)		0	0.00%
Ga	Gullied land, acid materials	Moderate	Gullied land (100%)	Slope erodibility (0.50)	0.1	0.10%
Gb	Gullied land, lloyd materials	Moderate	Gullied land (100%)	Slope erodibility (0.50)	0.9	1.40%
LeF	Louisburg sandy loam, steep phase	Moderate	Louisburg (100%)	Slope erodibility (0.50)	0.6	0.90%
Wa	Wehadkee silt loam	Slight	Wehadkee (100%)		6.6	10.00%
WcD3	Worsham sandy loam, severely eroded sloping phase	Slight	Worsham (100%)		5.2	7.80%

Due to the size and scope of this project and the nature of soil series maps, it is not reasonably practical to delineate the precise locations of the above listed soils on the construction plans. The NRCS soil survey and soil series maps for the project site are also available online at <http://websoilsurvey.nrcs.usda.gov/>.

REVISION DATES

FORSYTH COUNTY
ENGINEERING DEPARTMENT

ESPC GENERAL NOTES

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
51-01

\$DATE\$		\$TIME\$	\$PRF\$	\$DGN\$	COUNTY	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
\$USER		\$TBL\$			FORSYTH	WID 0208-1		
					Date: July 21, 2014			
SEQUENCE OF MAJOR ACTIVITIES					INSPECTIONS			
<p>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.</p> <p>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 facilitate project logistics, the Contractor is also responsible for selecting the location(s) of the construction exit(s).</p> <p>DESCRIPTION OF WORK BEING PERFORMED</p> <p>This project consists of widening and improving the roadway of Old Atlanta Road from Fire Station Access Rd to Sharon Trail.</p> <p>Stage 1A: Work in this stage includes clearing and per the construction plans and installation of perimeter controls.</p> <p>A) Initial BMPs: Install the following BMPs prior to construction</p> <p>a. Install perimeter silt fence and orange barrier fence as shown on Stage 1A plans</p> <p>B) Intermediate BMPs: N/A</p> <p>C) Final BMPs: N/A</p> <p>Stage 1: Work in this stage includes placing new permanent pavement, constructing northbound and southbound sections of Old Atlanta Road lane, constructing drainage structures, placing curb & gutter with sidewalk, and adding temporary pavement as shown in Stage 1 of plans. Work also includes constructing Glen Cree Drive, and Estate View Trace to final design.</p> <p>A) Initial BMPs: Install the following BMPs prior to : N/A</p> <p>B) Intermediate BMPs:</p> <p>a. Install inlet sediment traps as shown in Stage 1 of plans</p> <p>b. Install construction exits as shown in Stage 1 plans</p> <p>c. Install ditch checks as shown in Stage 1 of plans</p> <p>d. Install storm drain outlet protection as shown in Stage 1 of plans</p> <p>C) Final BMPs:</p> <p>a. Install final and temporary rip rap as shown in Stage 1 of plans</p> <p>b. Install matting blankets as shown in Stage 1 of plans</p> <p>c. Install perimeter silt fence and orange barrier fence for Stage 2 as shown in Stage 1 of plans</p> <p>Stage 2: Work in this stage includes placing new permanent pavement, constructing drainage structures, placing curb & gutter with sidewalk, and adding temporary pavement as shown in Stage 2 of plans.</p> <p>A) Initial BMPs: Install the following BMPs prior to : N/A</p> <p>B) Intermediate BMPs:</p> <p>a. Install inlet sediment traps as shown in Stage 2 of plans</p> <p>b. Install construction exits as shown in Stage 2 plans</p> <p>c. Install ditch checks as shown in Stage 2 of plans</p> <p>d. Install storm drain outlet protection as shown in Stage 2 of plans</p> <p>C) Final BMPs:</p> <p>a. Install final rip rap as shown in Stage 2 of plans</p> <p>b. Install matting blankets as shown in Stage 2 of plans</p> <p>c. Install perimeter silt fence and orange barrier fence for Stage 3 as shown in Stage 2 of plans</p> <p>Stage 3: Work in this stage includes placing new permanent pavement, constructing side roads to final design, constructing concrete islands and grassed medians, and placing final surface course.</p> <p>A) Initial BMPs: Install the following BMPs prior to : N/A</p> <p>B) Intermediate BMPs:</p> <p>a. Install inlet sediment traps as shown in Stage 3 of plans</p> <p>C) Final BMPs:</p> <p>a. Install matting blankets as shown in Stage 3 of plans</p> <p>NON-STORM WATER DISCHARGES</p> <p>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.</p>					<p>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 requirements. These inspections shall continue until the Notice of Termination (NOT) is submitted.</p> <p>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.</p> <p>DE-WATERING ACTIVITIES AND USE OF PUMPS</p> <p>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 utilizing by a Certified Design Professional. No separate payment will be made for water quality sampling of pump discharges.</p> <p>OTHER CONTROLS</p> <p>The contractor shall follow this ESPCP and ensure and demonstrate compliance with applicable State and/or local waste disposal, sanitary sewer or septic system regulations.</p> <p>The contractor shall control dust from the site in accordance with Section 161 of the current edition of the Department's Specifications.</p> <p>USE OF ALTERNATIVE AND/OR ADDITIONAL BMPS</p> <p>Alternative BMPs are not used on this project.</p> <p>SILT FENCE INSTALLATIONS WITH J-HOOKS AND SPURS</p> <p>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.</p> <p>DISCHARGES INTO, OR WITHIN ONE LINEAR MILE UPSTREAM OF AND WITHIN THE SAME WATERSHED AS, ANY PORTION OF A BIOTA IMPAIRED STREAM SEGMENT.</p> <p>All outfalls are either located further than 1 linear mile upstream or outside of the watershed of an 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).</p> <p>Since this project is further than 1 linear mile from an impaired stream segment, there is no TMDL implementation plan.</p>			
					REVISION DATES		FORSYTH COUNTY ENGINEERING DEPARTMENT	
							ESPC GENERAL NOTES	
							WID 0208-1 (PHASE 5) FORSYTH COUNTY	
							DRAWING No. 51-02	

\$DATE\$ \$USER		\$TIME\$ \$TBL\$	\$PRF\$		\$DGN\$		COUNTY FORSYTH		PROJECT NUMBER WID 0208-1		SHEET NO. TOTAL SHEETS					
SEDIMENT STORAGE																
The site has a total disturbed area 25.22 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 DRWG AREA (AC)	DIST AREA (AC)	REQ'D SEDIMENT STORAGE (CY)	TOTAL STORAGE PROVIDED (CY)	INLET SEDIMENT TRAPS		CHECK DAM S		SILT FENCE		SILT GATES					
					* OF DEVICES	TOTAL VOLUME (CY)	* OF DEVICES	TOTAL VOLUME (CY)	LENGTH OF FENCE (FT)	TOTAL VOLUME (CY)	* OF DEVICES	TOTAL VOLUME (CY)				
A	4.50	3.79	301.70	422.19	19	286.90			815	135.29						
B	1.27	1.02	85.16	75.50	5	75.50										
C	1.30	0.41	87.10	23.62			3	3.90	98	16.27	3	3.45				
D	2.41	2.41	161.47	193.34	9	135.90			346	57.44						
E	3.07	2.81	205.69	243.28	13	196.30			283	46.98						
F	0.46	0.46	30.89	60.07	3	45.30			89	14.77						
G	0.88	0.88	58.69	127.01	5	75.50	4	5.20	279	46.31						
H	1.44	1.31	96.48	90.60	6	90.60										
J	3.05	1.80	204.55	203.94	13	196.30			46	7.64						
K	3.95	3.74	264.45	324.90	21	317.10	6	7.80								
L	0.14	0.14	9.51	27.38	1	15.10			74	12.28						
M	2.28	0.91	152.49	45.30	3	45.30										
N	1.03	0.41	69.01	45.15			6	7.80	225	37.35						
O	1.34	0.52	89.78	53.16			4	5.20	282	46.81	1	1.15				
P	0.16	0.09	10.72	20.36			2	2.60	107	17.76						
Q	0.51	0.30	34.17	48.14			6	7.80	243	40.34						
R	6.97	1.12	466.99	83.83			5	6.50	452	75.03	2	2.30				
SHEET FLOW	S	1.15	0.59	77.05	296.48					1786	296.48					
	T	1.57	0.73	105.19	241.70					1456	241.70					
	U	0.30	0.13	20.10	16.93					102	16.93					
	V	0.77	0.52	51.59	131.97					795	131.97					
	W	0.20	0.09	13.40	35.52					214	35.52					
	X	1.10	0.67	73.70	180.61					1088	180.61					
	Z	0.38	0.37	25.46	0.00											
TOTAL					40.06	25.14	2684.29	2990.98	98.00	1479.80	36.00	46.80	8780.00	1457.48	6.00	6.90

In order 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.

Due to the large size of the drainage basins compared to the disturbed area adequate sediment storage was not obtained in basins B,C,H,J,M,N,O,R,U and Z. The use of sediment basins was investigated at each outfall,but their use would significantly increase the disturbed area thus creating more detriment than benefit.The additiona R/W required for sediment basins would also have impacted more homes and businesses than practical.Matting blanket was applied to all slopes on the project to help prevent the escape of sediment from the project.

SUBMITTED BY: SARAH E. WORACHEK, P.E.

LEVEL 11 CERTIFIED DESIGN
PROFESSIONAL
GSWCC# 0000068610
EXPIRES: 05/22/16

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REVISION DATES

FORSYTH COUNTY
ENGINEERING DEPARTMENT

ESPC GENERAL NOTES

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
51-03

\$DATE\$		\$TIMES\$		\$PRF\$		\$DGN\$				COUNTY		PROJECT NUMBER		SHEET NO.		TOTAL SHEETS	
\$USER				\$TBL\$						FORSYTH		WID 0208-1					

DATE: July 21, 2014

STREAM AND OPEN WATER BUFFER ENCROACHMENTS

Stream Buffers are not impacted by this project.

SAMPLING 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.

THE TOTAL SITE AREA IS 29.29 ACRES.										REPRESENTATIVE SAMPLING SCHEME					
SAMPLING INFORMATION										OUTFALL CHARACTERISTICS					
PRIMARY SAMPLED FEATURE	LOCATION (STATION AND OFFSET)	NAME OF RECEIVING WATER	APPLICABLE CONSTRUCTION STAGE FOR MONITORING	SAMPLING TYPE (OUTFALL OR RECEIVING WATER)	DRAINAGE AREA (FOR THE RECEIVING WATER) (SQ. MILE)	WARM OR COLD WATER STREAM	APPENDIX B NTU VALUE (OUTFALL MONITORING ONLY)	ALLOWABLE NTU INCREASE (FOR RECEIVING WATER)	LOCATION DESCRIPTION	CONSTRUCTION ACTIVITY	DIST. AREA (ACRES)	AVERAGE OUTFALL SLOPE (ft/ft)	SOIL EROSION INDEX	REPRESENTED OUTFALL DRAINAGE BASINS	
A	190+38/91' RT	DICK CREEK	ALL STAGES	OUTFALL	6.81	WARM	50	N/A	30" RCP OUTFALL	ROAD WIDENING	3.79	0.060	6.56	D, E, K	
J	236+04/71' RT	DICK CREEK	ALL STAGES	OUTFALL	6.81	WARM	50	N/A	24" RCP OUTFALL	ROAD WIDENING	1.80	0.028	6.56	B, H, R, C	
F	224+06/80' RT	DICK CREEK	ALL STAGES	OUTFALL	6.81	WARM	50	N/A	18" RCP OUTFALL	ROAD WIDENING	0.46	0.146	6.56	G, L, M, N, O, P, Q, S, T, U, V, W, X, Z	

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.

WATER QUALITY INSPECTING AND SAMPLING PROCEDURES

See Special Provision 167 and other contract documents for Monitoring Sampling Methods and Procedures.

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 GARIO0002.

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 the 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 overtopping. 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 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 a 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 in 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".

REVISION DATES

FORSYTH COUNTY
ENGINEERING DEPARTMENT

ESPC GENERAL NOTES

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
51-04

GEORGIA SOIL AND WATER CONSERVATION COMMISSION
EROSION SEDIMENTATION POLLUTION CONTROL CHECKLIST:
INFRASTRUCTURE CONSTRUCTION PROJECTS



SWCD: UPPER CHATTAHOOCHEE RIVER

Project Name: OLD ATLANTA ROAD PHASE 5
City/County: FORSYTH COUNTY
Address:
Date on Plans: 06/25/2020

PLAN INCLUDED		TO BE SHOWN ON ES&PC PLAN	
PAGE	Y/N		
51-0004	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)
50-0001	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)
50-0001	Y	3.	The name and phone number of the 24-hour local contact responsible for erosion, sedimentation and pollution controls.
50-0001	Y	4.	Provide the name, address, e-mail address, and phone number of primary permittee.
53-001	Y	5.	Note total and disturbed acreage of the project or phase under construction.
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.
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.
51-0002	Y	8.	Description of the nature of construction activity.
50-0001	Y	9.	Provide vicinity map showing site's relation to surrounding areas. Include designation of specific phase, if necessary.
53-0001	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.
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.
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.*
50-0004	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 permit as applicable.*
51-0004	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.*
51-0003	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 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."
51-0003	Y	16.	Provide a description of any buffer encroachments and indicate whether a buffer variance is required.
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.*"
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.*"
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	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."
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."
N/A	N	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 an Blata Impaired Stream segment must comply with Part III.c. of the Permit. Include the completed Appendix I listing all the BMPs that will be used for those areas of the site which discharge to the Impaired Stream Segment.*
N/A	N	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.*
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.*

EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN GENERAL NOTES



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			WID 0208-1 (PHASE 5) FORSYTH COUNTY	
				DRAWING No. 51-0005

- 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 the practices to provide cover for building materials and building products on site.*
- 51-0003

Y

28.

Description of practices that will be used to reduce the pollutants in storm water discharges.*
- 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).
- 51-0004

Y

30

Provide complete requirements of inspections and record keeping by the primary permittee.*
- 51-0004

Y

31

Provide complete requirements of sampling frequency and reporting of sampling results.*
- 51-0004

Y

32

Provide complete details for retention of records as per Part IV.F. of the permit.
- 51-0004

Y

33

Description of analytical methods to be used to collect and analyze the samples from each location.*
- 51-0004

Y

34

Appendix B rationale for NTU values at all outfall sampling points where applicable.*
- 51-0004

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.*
- 51-0003

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

37

Graphic scale and North arrow.
- 54-0001

Y

38

Existing and proposed contour lines with contour lines drawn at an interval in accordance with the following:

Existing Contours

USGS 1" : 2000' Topographical Sheets

Proposed Contours

1" : 400' Centerline Profile
- 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 EPD or the Georgia Soil and Water Conservation Commission). Please refer to the Alternative BMP Guidance Document found at www.gaswcc.org.
- N/A

N

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.*
- 53-0001

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.
- 53-0001

Y

42

Delineation of on-site wetlands and all State waters located on and within 200 feet of the project site.
- 53-0001

Y

43

Delineation and acreage of contributing drainage basins on the project site.
- 53-0001

Y

44

Delineate on-site drainage and off-site watersheds using USGS 1" : 2000' topographical sheets.
- 53-0001

Y

45

An estimate of the runoff coefficient or peak discharge flow of the site prior to and after construction activities are completed.
- 53-0001

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

47

Soil series for the project site and their delineation.
- 54-0001

Y

48

The limits of disturbance for each phase of construction.
- 51-0003

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 the surface are not feasible, a written justification explaining this decision must be included in the plan.
- 52-0001

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.
- 56-0001

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

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.

*If using this checklist for a project that is less than 1 acre and not part of a common development but within 200 ft of a perennial stream the * checklist items would be N/A.

Effective January 1, 2020

EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN GENERAL NOTES



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P A R T N E R S

REVISION DATES

06-24-20		

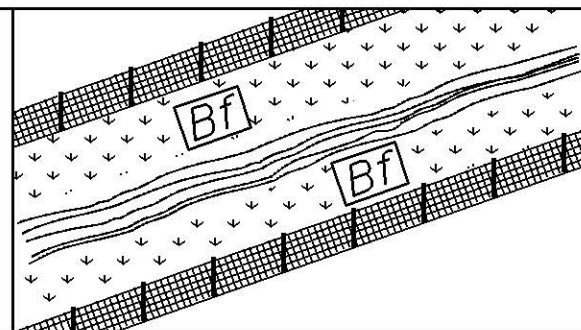

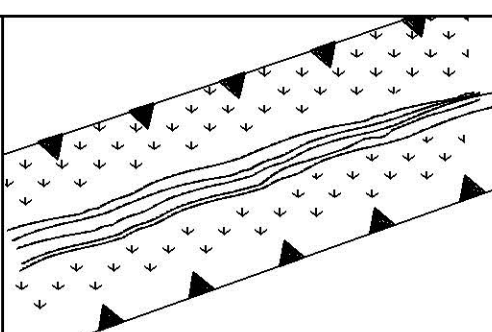

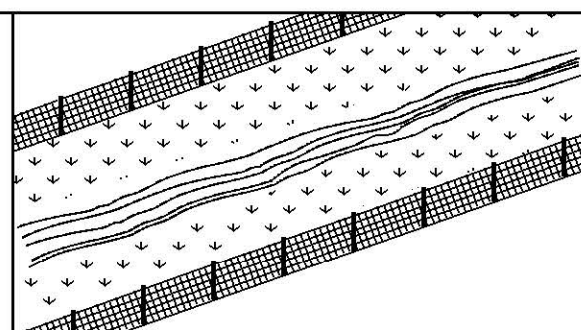

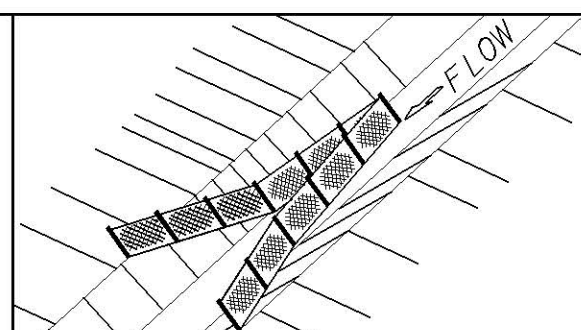
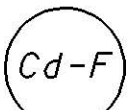
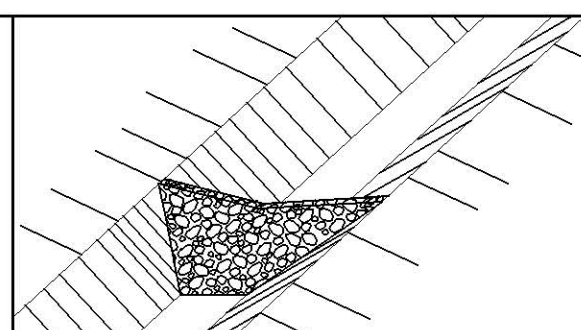

FORSYTH COUNTY
ENGINEERING DEPARTMENT

ESPC GENERAL NOTES

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
51-0006

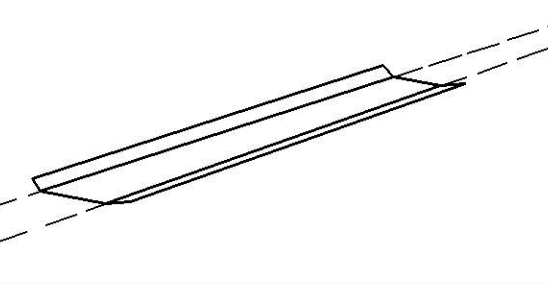
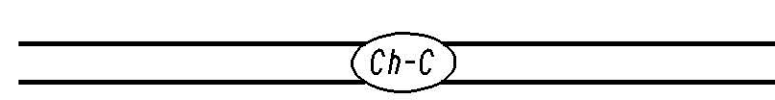
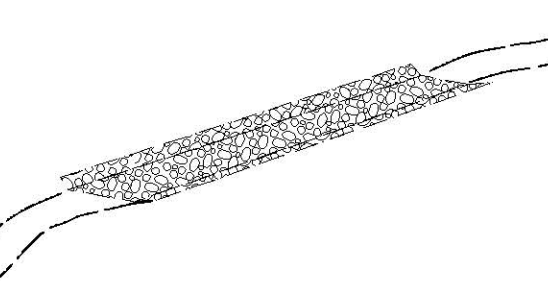

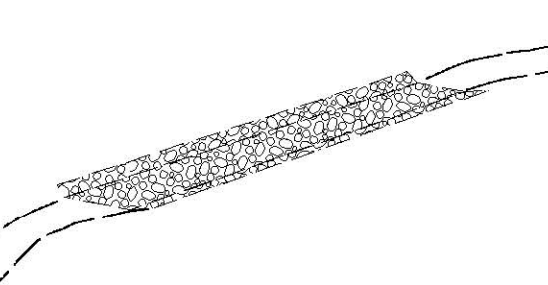

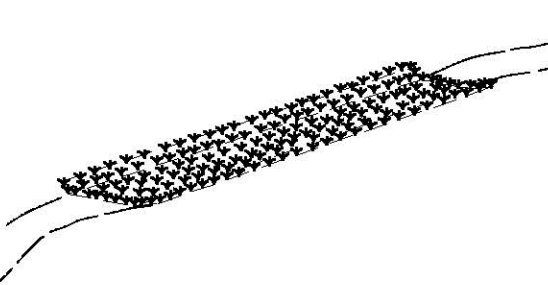
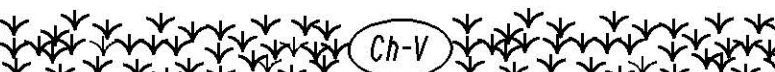
				STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
				GA.	WID 0208-1		

	CODE	PRACTICE STD :SPC's :SECTION	DETAIL	DESCRIPTION
	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. THE BOUNDARIES OF THESE AREAS ARE BE DELINEATED BY ORANGE BARRIER FENCE.
		SYMBOL		
ESA		ENVIRONMENTALLY SENSITIVE AREA		ENVIRONMENTALLY SENSITIVE AREA (ESA) CONTAINS RESOURCES THAT ARE ENVIRONMENTALLY, CULTURALLY, OR HISTORICALLY SENSITIVE. ESA AREAS INCLUDE, BUT ARE NOT LIMITED TO: STATE WATER BUFFERS, ARCHAEOLOGICAL SITES, HISTORIC 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		
		ORANGE BARRIER FENCE		ORANGE BARRIER FENCE DELINEATES ESA AREAS WHERE THE CONTRACTOR SHALL NOT CLEAR, GRUB, PLACE CONSTRUCTION MATERIALS OR EQUIPMENT WITHIN THIS AREA.
		LINE CODE		
	Cd-F	FABRIC CHECK DAM CONSTRUCTION DETAIL SECTION 171		A CHECK DAM COMPOSED OF SYNTHETIC FIBER FABRIC, WIRE REINFORCED, POST, AND BRACING PLACED IN DITCHES IN A SPECIAL CONFIGURATION WHICH CONTROLS ENERGY DISSIPATION AND FILTRATION OF STORM WATER. SEE CONSTRUCTION DETAIL D-24b FOR SPACING REQUIREMENT. THIS ITEM IS SUITABLE FOR USE IN ROADSIDE DITCHES THAT ARE PART OF INFRASTRUCTURE CONSTRUCTION PROJECTS. IF THIS ITEM IS USED IN AN AREA WITHOUT A SEDIMENT BASIN CONSIDERATION SHOULD BE GIVEN TO USING TWO OR MORE ROCK FILTER DAMS NEAR THE DISCHARGE POINT.
		LINE CODE		
	Cd-S	STONE OR SANDBAG CHECK DAM SECTION 163, 603		STONE CHECK DAMS ARE USED IN ROADWAY DITCHES. GEOTEXITLE UNDERLINER SHALL BE USED WHEN PLACING STONE CHECK DAMS. CONTRACTOR MAY USE SANDBAG CHECK DAMS IN LIEU OF STONE CHECK DAMS. SANDBAG CHECK DAMS MUST BE USED IN CONCRETE LINED CHANNELS.
		LINE CODE		

NOTE:


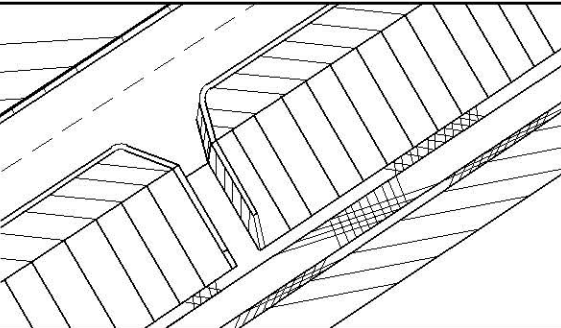
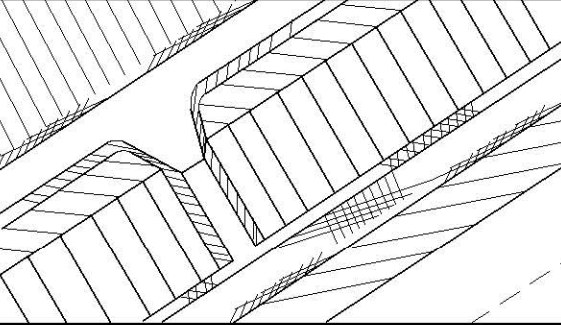
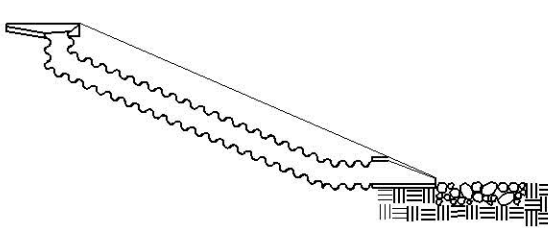
1. DO NOT USE EROSION CONTROL ITEMS IN A FLOWING STREAM OR IN A TIDAL AREA BELOW HIGH TIDE.

2. FOR ADDITIONAL INFORMATION ON THE DESIGN AND APPLICATION OF EROSION CONTROL MEASURES SEE THE GEORGIA SOIL AND WATER CONSERVATION COMMISSION, "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA".

	CODE	PRACTICE STD :SPC's :SECTION	DETAIL	DESCRIPTION
	Ch-C	CHANNEL CONCRETE		THIS ITEM CONSISTS OF CONSTRUCTING A 4" THICK CONCRETE CHANNEL. THE CONCRETE SHALL PROTECT THE DITCH FLOWING TO A DEPTH "Dp" RECOMMENDED BY THE GDOT DITCH PROTECTION PROGRAM "Dp" SHALL BE IDENTIFIED IN A TABLE LOCATED ON THE SUMMARY OF QUANTITIES SHEETS
		SECTION 161, 441		
	Ch-Rp1	CHANNEL RIP RAP TYPE 1		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 DITCH FLOWING TO A DEPTH "Dp" RECOMMENDED BY THE GDOT DITCH PROTECTION PROGRAM. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED ALONG THIS CHANNEL SUCH AS Sd1-C, Rdc OR Sg. "Dp" SHALL BE IDENTIFIED IN A TABLE LOCATED ON THE SUMMARY OF QUANTITIES SHEETS
		SECTION 161, 603		
	Ch-Rp3	CHANNEL RIP RAP TYPE 3		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 DITCH FLOWING TO A DEPTH "Dp" RECOMMENDED BY THE GDOT DITCH PROTECTION PROGRAM. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED ALONG THIS CHANNEL SUCH AS Sd1-C, Rdc OR Sg. "Dp" SHALL BE IDENTIFIED IN A TABLE LOCATED ON THE SUMMARY OF QUANTITIES SHEETS
		SECTION 161, 603		
	Ch-V	CHANNEL GRASS		USED TO IMPROVE OR STABILIZE A NEW OR EXISTING CHANNEL. IT IS CONSTRUCTED IN STORMWATER DRAINAGE DITCHES. THIS MEASURE SHALL BE DESIGNED IN ACCORDANCE WITH THE GDOT DITCH PROTECTION PROGRAM ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED. TYPICALLY NOT SHOWN IN PLANS.
		SECTION 161, 700		

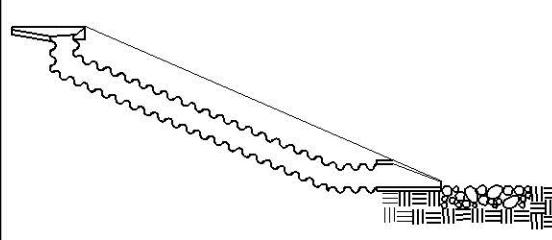
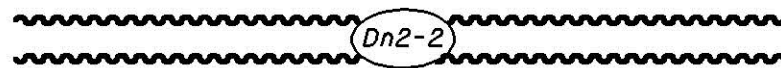
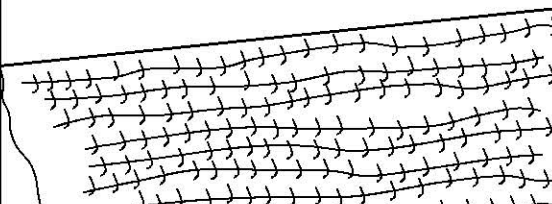
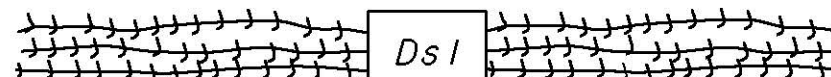
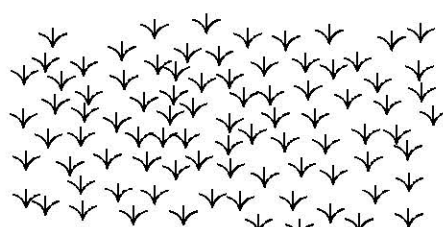
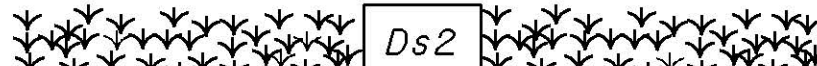
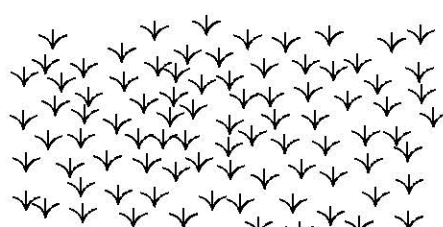
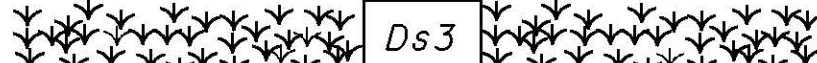
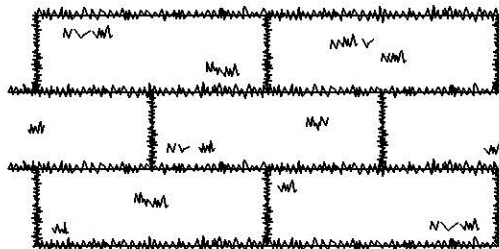
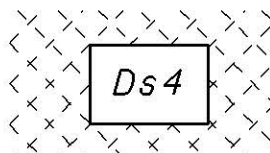
DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA									
EROSION CONTROL LEGEND AND UNIFORM CODE SHEET SHEET 1 OF 6									
NO SCALE JANUARY 2007									
DRAWING No. 52-001									

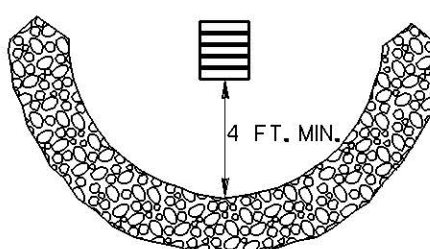

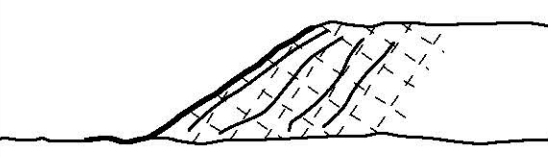

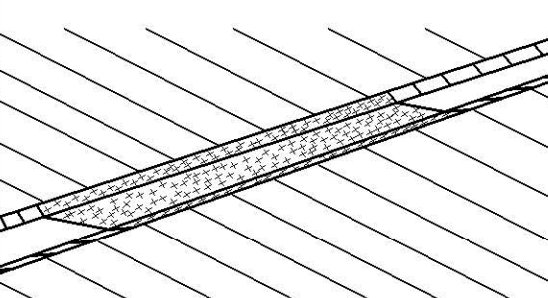
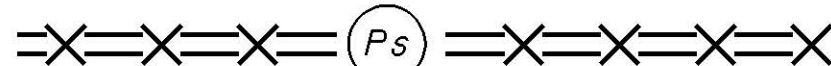
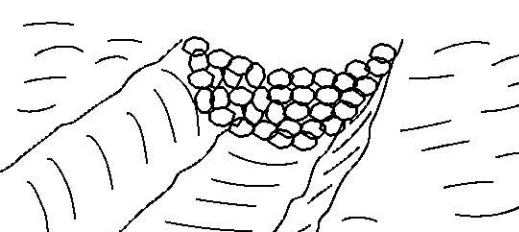
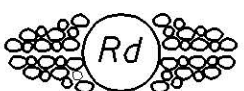
UPDATED DRAWING NO.	1-24-13	REMOVED Cd-S DESCRIPTION, 10-2-12							
REMOVED Be & Ch-Br, AND RELOCATED Ch-Rp1, Ch-RP3									
AND Ch-V CODES FROM ECL&UC SHEET 2 OF 6.									
REV. Be, ADDED Bf, ESA,	11-13-07								
OFB AND Ch-F									
REVISED TITLE BLOCK	1-9-07								
REVISION	DATE								
TC	TC	NUMBER EC-LI							

	CODE	PRACTICE STD. : SPC's : SECTION	DETAIL	DESCRIPTION
	Dn1	DOWN DRAIN STRUCTURE FLEXIBLE CONSTRUCTION DETAIL SECTION 163		A TEMPORARY PIPE SLOPE DRAIN IS A PLASTIC FLEXIBLE PIPE TO CARRY WATER FROM THE WORK AREA TO A LOWER ELEVATION. TEMPORARY SLOPE DRAINS SHOULD BE PLACED AT INTERVALS OF 500 FEET ON A 0 TO 2 PERCENT GRADE, 200 FEET ON STEEPER GRADES AND MORE FREQUENTLY AS DICTATED BY FIELD CONDITIONS. THE USUAL PIPE SIZE IS 10 INCH CORRUGATED. THE OUTLET AREA SHOULD BE STABILIZED WITH SILT FENCE, SUMP HOLE, HAYBALES, ANGLING OUTLET IN UPHILL DIRECTION OR OTHER APPROPRIATE MEANS FOR VELOCITY DISSIPATION AND EROSION CONTROL. THE PIPE WILL BE ANCHORED WITH STAKES AT INTERVALS NOT TO EXCEED 10'.
	Dn2-A	PERMANENT DOWN DRAIN STRUCTURE CONCRETE CONSTRUCTION DETAIL 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 OR OTHER CRITERIA).
	Dn2-B	PERMANENT DOWN DRAIN STRUCTURE CONCRETE CONSTRUCTION DETAIL 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).
	Dn2-I	PERMANENT DOWN DRAIN STRUCTURE GA. STD. 9017J TPI, 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).

I-24-I3	I0-I12			II-I3-07	I9-I07	DATE	DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA	
TC	UPDATED DRAWING NO.	REV. DI LABEL & DESCRIPTION. RELOCATED Dn2-A, Dn2-B, AND Dn2-CODES FROM ECL & UC SHEET 3 OF 6.	GLO	REVISED ORDER	REVISED TITLE BLOCK	REVISION	EROSION CONTROL LEGEND AND UNIFORM CODE SHEET SHEET 2 OF 6	
TC			GLO				NO SCALE	JANUARY 2007
			GLO				NUMBER EC-L2	DRAWING No. 52-002

				STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
				GA.	WID 0208-1		

	CODE	PRACTICE STD :SPC's :SECTION	DETAIL	DESCRIPTION
	Dn2-2	PERMANENT DOWN DRAIN STRUCTURE GA. STD. 9017J TP2, 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		
	Ds1	MULCH SECTION 163		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.
		LINE CODE		
	Ds2	TEMPORARY GRASSING SECTION 163		THE SOWING OF A QUICK GROWING SPECIES OF GRASS SUITABLE TO THE AREA AND SEASON IS TO BE USED ON ALL PROJECTS.
		LINE CODE		
	Ds3	PERMANENT GRASSING SECTION 700		THE SOWING OF PERMANENT VEGETATION, SUCH AS GRASS, SUITABLE TO THE AREA AND SEASON IS TO BE USED ON ALL PROJECTS. PERMANENT VEGETATIVE REQUIREMENTS ARE ADDRESSED BY STANDARD SPECIFICATIONS AND ARE NOT TYPICALLY SHOWN ON THE PLANS; HOWEVER, THEY MAY BE SHOWN ON THE PLANS FOR HIGHLY SENSITIVE AREAS WHERE THESE VEGETATIVE PRACTICES ARE CRITICAL.
		LINE CODE		
	Ds4	SODDING SECTION 700		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.
		PATTERN		

	CODE	PRACTICE STD :SPC's :SECTION	DETAIL	DESCRIPTION
	Fr	FILTER RING CONSTRUCTION DETAIL		A TEMPORARY STONE BARRIER CONSTRUCTED AT DRAINAGE STRUCTURE INLETS. THIS REDUCES THE VELOCITY OF THE RUNOFF AND FILTERS SEDIMENT FROM THE RUNOFF. SEE CHAPTER 6 OF THE MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA FOR DESIGN CRITERIA AND DETAILS.
		LINE CODE		
	Mb	EROSION CONTROL MATS CONSTRUCTION DETAIL SECTION 716		ALL CUT OR FILL SLOPES OF 2.5:1 OR STEEPER AND WITHIN 50' OF ALL CROSS DRAINS AND CULVERTS.
		PATTERN		
	Ps	PERMANENT SOIL REINFORCING MAT CONSTRUCTION DETAIL SECTION 710		THIS THREE DIMENSIONAL EROSION CONTROL MAT IS USED IN DITCHES TO STABILIZE THE SOIL BY REINFORCING THE GRASS ROOTS TO PROVIDE LONG-TERM PROTECTION FOR SHEAR STRESSES. (THIS IS ALSO CALLED "Mb" IN THE MANUAL FOR EROSION & SEDIMENT CONTROL IN GEORGIA.)
		LINE CODE		
	Rd	ROCK FILTER DAM CONSTRUCTION DETAIL SECTION 163, 603.		ROCK FILTER DAMS ARE CONSTRUCTED OF TYPE 3 STONE RIP RAP AND ARE USED TO PROTECT SMALL STREAMS OR DRAINAGEWAYS. TO BE USED IN SMALL DRAINAGE CHANNELS OF 50 ACRES OR LESS. THE RIP RAP SHOULD BE PLACED ON A GEOTEXTILE UNDERLINER.
		LINE CODE		

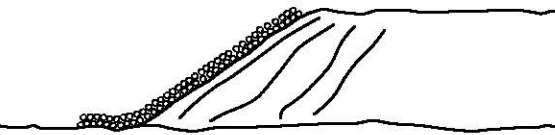
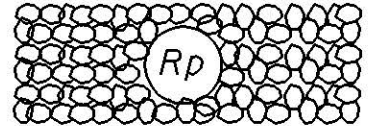
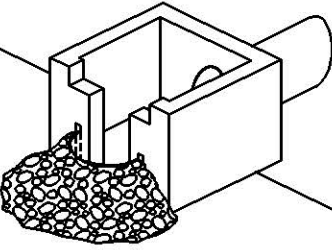

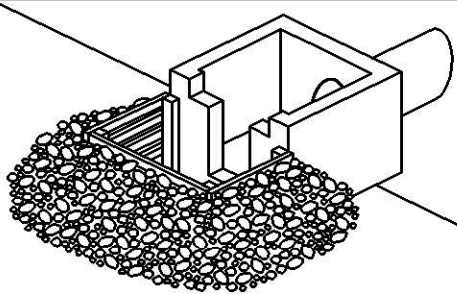

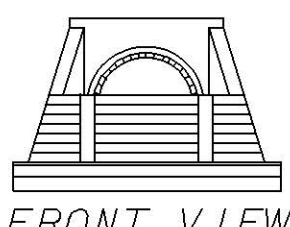
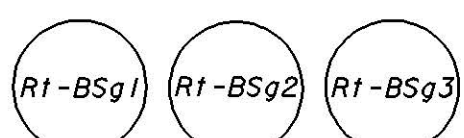
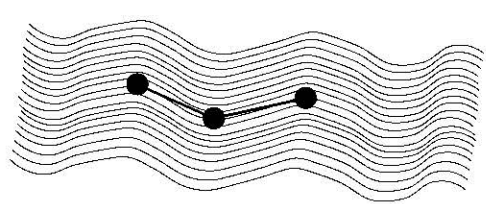

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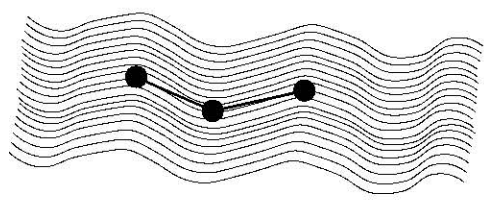
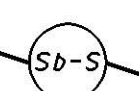
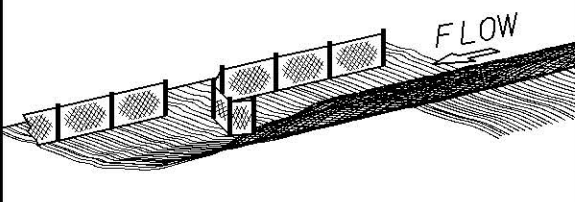

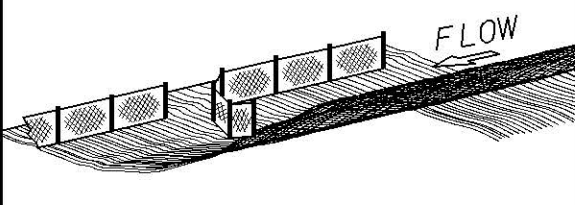

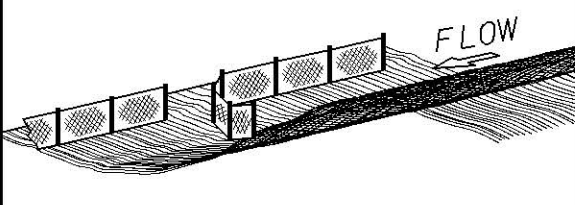

1. DO NOT USE EROSION CONTROL ITEMS IN A FLOWING STREAM OR IN A TIDAL AREA BELOW HIGH TIDE.

2. FOR ADDITIONAL INFORMATION ON THE DESIGN AND APPLICATION OF EROSION CONTROL MEASURES, SEE THE GEORGIA SOIL AND WATER CONSERVATION COMMISSION, "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA".

TC	UPDATED DRAWING NO., ADDED 1-24-13					DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA	
	Ds3 & Ds4 CODES, RELOC. Rp & Rt-P CODES TO DRAWING NO. 52-004.					EROSION CONTROL LEGEND AND UNIFORM CODE SHEET SHEET 3 OF 6	
	TC	RELOCATED Rd, Rp, & Rt-B 10-2-12					
		CODES FROM ECL&UC SHEET 4 OF 6.					
	GLO	DELETED Fd, REVISED ORDER	11-13-07			NO SCALE	
	GLO	REVISED TITLE BLOCK	11-19-07				
	BY	REVISION	DATE			JANUARY 2007	
		NUMBER				DRAWING No.	
		EC-L3				52-003	

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	WID 0208-1		

	CODE	PRACTICE STD :SPC's :SECTION	DETAIL	DESCRIPTION
	<div>Rp</div>	RIPRAP SECTION 603	 PATTERN 	RIP RAP IS A FLEXIBLE PERMANENT BLANKET FOR PROTECTION OF FILL SLOPES AND 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.
	<div>Rt-P</div>	RETROFITTING CONSTRUCTION DETAIL SECTION 163	 LINE CODE 	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. THIS ITEM SHOULD BE DESIGNED ACCORDING TO CHAPTER 6 IN THE "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA"
	<div>Rt-B</div>	RETROFITTING CONSTRUCTION DETAIL SECTION 163	 LINE CODE 	A SLOTTED BOARD DAM WITH STONE 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 100 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. THIS ITEM SHOULD BE DESIGNED ACCORDING TO CHAPTER 6 IN THE "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA"
	<div>Rt-BSg1</div> <div>Rt-BSg2</div> <div>Rt-BSg3</div>	SILT CONTROL GATES CONSTRUCTION DETAIL D-20 SECTION 163	 FRONT VIEW LINE CODE 	A SILT CONTROL GATE IS A STRUCTURE PLACED ON A PIPE, SMALL BOX CULVERT, OR DROP INLET TO FORM A BASIN TO CATCH SILT AND PREVENT IT FROM LEAVING THE CONSTRUCTION SITE. IT IS EFFECTIVE ON SMALL DRAINAGE AREAS ONLY. DO NOT USE IN STATE WATERS. Rt-BSg1=TYPE 1: USED ON BOX CULVERTS Rt-BSg2=TYPE 2: USED ON STRAIGHT HEADWALLS Rt-BSg3=TYPE 3: USED ON FLARED END SECTIONS AND TAPERED HEADWALLS
	<div>Sb-F</div>	SILT RETENTION BARRIER FLOATING SECTION 170	 LINE CODE 	A FLOATING BARRIER IS USED TO PREVENT SEDIMENT FROM MOVING IN WATER BY FORCING IT TO DROP OUT OF SUSPENSION BEFORE IT MOVES OUT OF THE CONSTRUCTION AREA. IT IS USUALLY USED WHERE CONSTRUCTION IS REQUIRED IN A LARGE BODY OF WATER SUCH AS LAKES AND RIVERS. IT SHOULD BE USED AS DIRECTED BY THE ENGINEER. THIS ITEM IS ONLY TO BE USED WHEN PERMITTED FILL IS BEING PLACED INTO A STATE WATER, OR AS A SUPPLEMENT TO ADEQUATELY PLACED BMP'S.

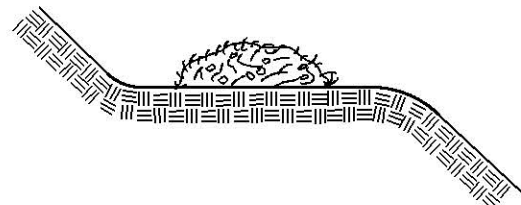
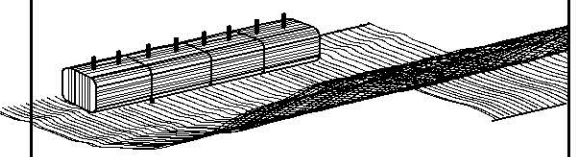
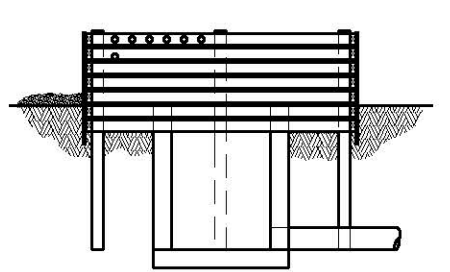
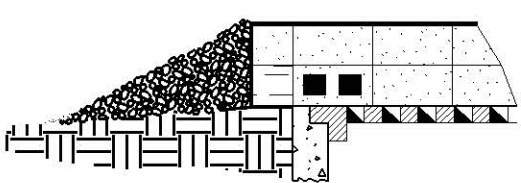
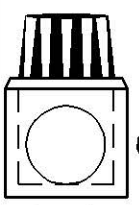
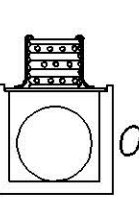
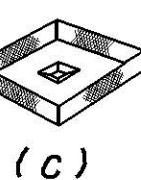
	CODE	PRACTICE STD :SPC's :SECTION	DETAIL	DESCRIPTION
	<div>Sb-S</div>	SILT RETENTION BARRIER STAKED SECTION 170	 STAKED LINE CODE 	A STAKED BARRIER IS USED TO PREVENT SEDIMENT FROM MOVING IN WATER BY FORCING IT TO DROP OUT OF SUSPENSION BEFORE IT MOVES OUT OF THE CONSTRUCTION AREA. IT IS USUALLY USED WHERE CONSTRUCTION IS REQUIRED IN SHALLOW INUNDATED AREAS. IT SHOULD BE USED AS DIRECTED BY THE ENGINEER. A STAKED BARRIER MAY BE USED TO PROTECT A SMALL STREAM WHILE IT IS BEING REALIGNED OR WIDENED IN "Ch". IN THIS CASE THE BARRIER SHOULD EXTEND TO THE BOTTOM OF THE STREAM. IT SHOULD BE LIMITED TO 5' IN HEIGHT UNLESS OTHERWISE DIRECTED. STAKED BARRIERS IN SMALL STREAMS SHOULD EXTEND 1' ABOVE NORMAL WATER. THIS ITEM IS ONLY TO BE USED WHEN PERMITTED FILL IS BEING PLACED INTO A STATE WATER, OR AS A SUPPLEMENT TO ADEQUATELY PLACED BMP'S.
	<div>Sd1-A</div>	SILT FENCE TYPE A CONSTRUCTION DETAIL SECTION 171	 LINE CODE 	USED ALONG THE TOE OF FILLS LESS THAN 10' HIGH, ALONG THE RIGHT OF WAY LINE OR PARALLEL TO STREAMS. THE FENCE SHOULD NEVER RUN CONTINUOUS. IT SHOULD TURN BACK INTO THE FILL TO CREATE SMALL POCKETS TO TRAP SILT.
	<div>Sd1-B</div>	SILT FENCE TYPE B CONSTRUCTION DETAIL SECTION 171	 LINE CODE 	TYPE B MAY BE USED IN LIEU OF BALED STRAW AND AT THE TOE OF FILLS LESS THAN 10 FEET HIGH.
	<div>Sd1-C</div>	SILT FENCE TYPE C CONSTRUCTION DETAIL SECTION 171	 LINE CODE 	A WOVEN SYNTHETIC FIBER FABRIC PLACED IN FRONT OF A WIRE FENCE. IT CAN BE USED ALONG THE TOE OF THE FILL, ALONG THE RIGHT OF WAY LINE OR PARALLEL TO STREAMS. IT IS USED TO CAPTURE SEDIMENT FROM FILLS OVER 10 FEET HIGH AND UNDER ALL BRIDGES.

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 CONTROL MEASURES, SEE THE GEORGIA SOIL AND WATER CONSERVATION COMMISSION, "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA".

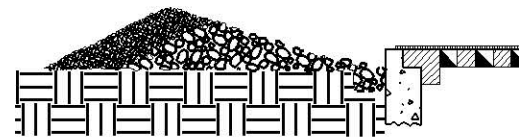
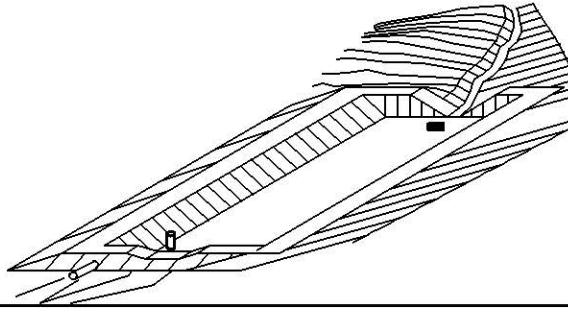
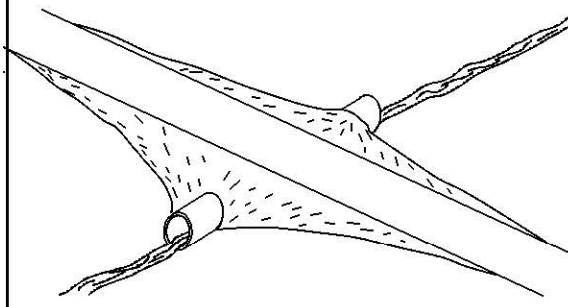
1-24-13			10-2-12			11-13-07	11-9-07	DATE	DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA		
UPDATED DRAWING NO. & RELOCATED Sd1-Bb&Sd1-Hb CODES TO DRAWING NO. 52-005.			RELAELED AND RELOCATED Sg1-Sg2, Sg-3 TO Rt-BSg1, Rt-BSg2, & Rt-BSg3 CODES AND Sd1-Bb&Sd1-Hb CODES FROM ECL&UC SHT. 5 OF 6.			REV. Sd1-A	REV. Sb-F, Sb-S, Sd1-A, Sd1-B AND Sd1-C.	REVISED TITLE BLOCK	EROSION CONTROL LEGEND AND UNIFORM CODE SHEET SHEET 4 OF 6		
TC			TC			GLO	GLO	GLO	NO SCALE	JANUARY 2007	
								BY	NUMBER EC-L4		DRAWING No. 52-004

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	WID 0208-1		

	CODE	PRACTICE STD :SPC's :SECTION	DETAIL	DESCRIPTION
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	<div>Sd1-Bb</div> <div>BRUSH BARRIER</div> <div>CONSTRUCTION DETAIL</div> <div></div>	<p>THIS ITEM CONSISTS OF INTERMINGLED BRUSH, LOGS, ETC. SO AS NOT TO FORM A SOLID DAM. CONSTRUCTED AT THE TOE OF FILL SLOPES 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. PAYMENT FOR THIS ITEM IS INCLUDED IN THE CLEARING AND GRUBBING COST. NO SEPERATE PAYMENT SHALL BE MADE.</p>
	<div>LINE CODE</div> <div>* * * Sd1-Bb * * *</div>	
	<div>Sd1-Hb</div> <div>SEDIMENT BARRIER</div> <div>CONSTRUCTION DETAIL SECTION 163</div> <div></div>	<p>A BARRIER OF BALED STRAW IS USED TO PREVENT SEDIMENT FROM LEAVING THE CONSTRUCTION SITE. IT IS USED IN DITCHES AS DITCH CHECKS OR ALONG THE TOE OF SLOPE OR RIGHT OF WAY IN FILLS LESS THAN 10 FEET HIGH. THE BALES SHOULD RUN PARALLEL TO THE SILT YIELDING AREA UNTIL THE TOP OF THE BALE IS 6 INCHES LOWER THAN THE GROUND ELEVATION OF THE BEGINNING BALE. THEY SHOULD THEN TURN INTO THE FILL WITH A LOW POINT FOR THE WATER TO DRAIN OVER THE BALE. IN DITCHES, BALED STRAW SHOULD BE PERPENDICULAR TO THE FLOW. USED FOR SLOPES LESS THAN 1%. USE 100' SPACING. BALED STRAW SHALL BE STAKED SECURELY TO THE GROUND.</p>
	<div>LINE CODE</div> <div>— S — S — S — Sd1-Hb — S — S — S —</div>	
	<div>Sd2-B</div> <div>BAFFLE BOX INLET SEDIMENT TRAP CONSTRUCTION DETAIL D42 SPECIFICATIONS SECTION 163</div> <div></div>	<p>USED FOR INLETS RECEIVING RUNOFF WITH A HIGHER VOLUME OR VELOCITY. A GUIDE FOR USE WILL BE FOR AN INLET RECEIVING A Q=7cfs.</p>
	<div>LINE CODE</div> <div>Sd2-B</div>	
	<div>Sd2-Bg</div> <div>BLOCK & GRAVEL DROP INLET PROTECTION CONSTRUCTION DETAIL D42 SPECIFICATIONS SECTION 163</div> <div></div>	<p>USED FOR INLET PROTECTION 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 A Q=5-7 cfs.</p>
	<div>LINE CODE</div> <div>Sd2-Bg</div>	
	<div>Sd2-F</div> <div>INLET SEDIMENT TRAP CONSTRUCTION DETAILS SECTION 163</div> <div> OR  OR  (a) (b) (c)</div>	<p>(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%</p> <p>THIS ITEM IS USED TO PREVENT SILT FROM ENTERING THE PIPE SYSTEM. SHALL NOT APPLY TO INLETS RECIEVING CONCENTRATED FLOWS. RECOMMENDED FOR INLET RECEIVING FLOWS THAT RANGE FROM Q=0-4 cfs.</p>
	<div>LINE CODE</div> <div>Sd2-F</div>	

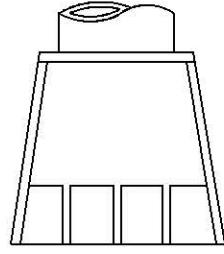
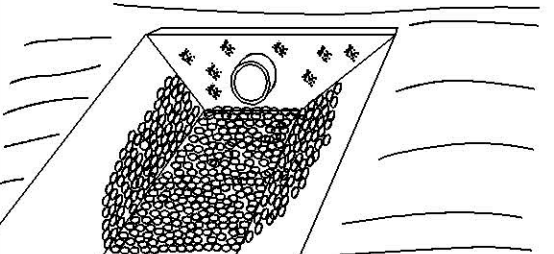
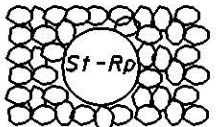
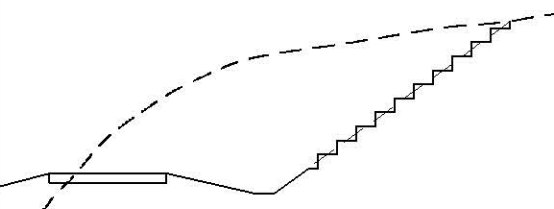
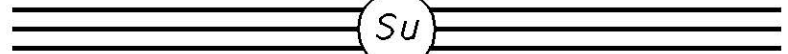
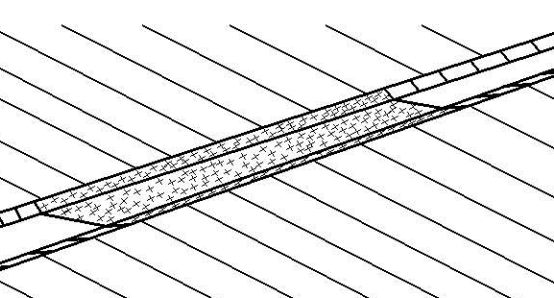
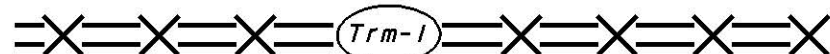
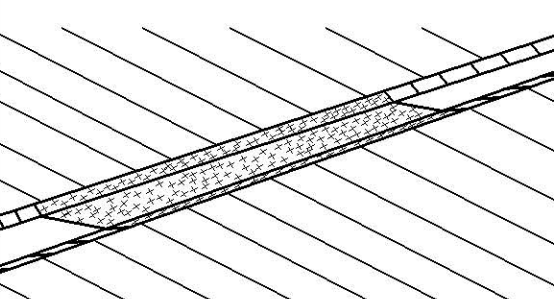
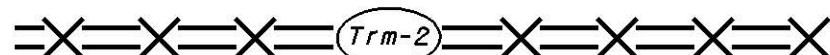
	CODE	PRACTICE STD :SPC's :SECTION	DETAIL	DESCRIPTION
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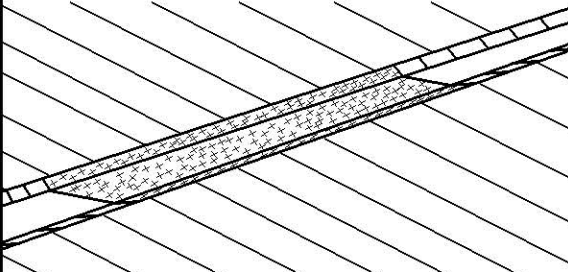
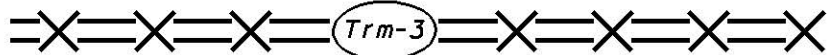
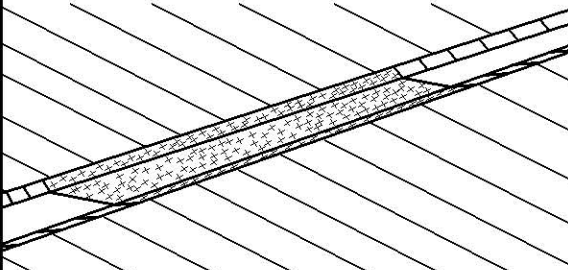
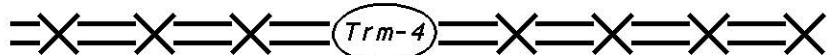
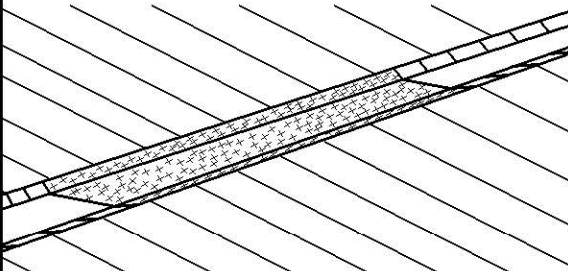
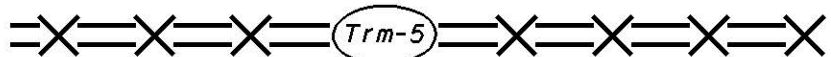
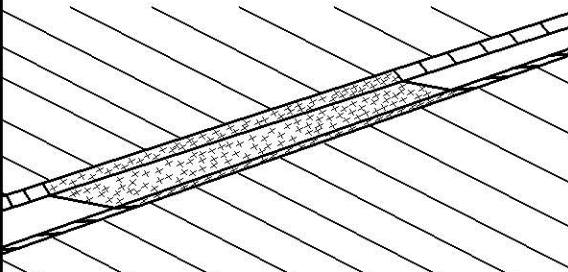
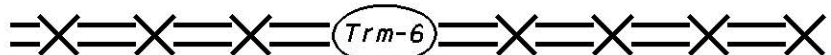
		GRAVEL DROP INLET PROTECTION CONSTRUCTION DETAIL D42 SPECIFICATIONS SECTION 163		USED FOR INLET PROTECTION WHERE HEAVY CONCENTRATED FLOWS ARE EXPECTED. STONE AND GRAVEL ARE USED TO TRAP SEDIMENT. THE SLOPE TOWARD THE INLET SHALL BE NO MORE THAN 3:1. A GUIDE FOR USE WILL BE FOR AN INLET RECEIVING A Q=3-5 cfs.
	Sd2-G	LINE CODE Sd2-G		
		SEDIMENT BASIN CONSTRUCTION DETAIL SECTION 163		A BASIN EXCAVATED OR AN AREA THAT IS DAMMED. THE BASIN IS DESIGNED TO HOLD A SEDIMENT LOAD OF 67 CUBIC YARDS OF VOLUME PER ACRE OF DRAINAGE AREA. IT IS USED FOR DRAINAGE AREAS OF 3 TO 5 ACRES OR WHERE A ROADWAY CUTS OR FILLS EXCEEDS 1,000 FEET IN LENGTH. IF A SEDIMENT BASIN IS USED ON AN AREA LARGER THAN 5 ACRES SPECIAL CONSIDERATION FOR CLEAN OUT IS REQUIRED. SUFFICIENT RIGHT OF WAY OR PERMANENT EASEMENT NEEDED FOR THE BASIN AND ACCESS FOR CLEAN OUT VIA A ROUTE WITH 3:1 SLOPES OR LESS. SEDIMENT BASINS SHOULD ALSO BE CONSIDERED WHERE HIGH FILLS OVER 30 FEET DRAIN TO ONE LOCATION.
	Sd3	LINE CODE Sd3		
		STREAM CROSSING SECTION 161		A TEMPORARY BRIDGE OR PIPE STRUCTURE PROTECTING A STREAM OR WATER COURSE FROM DAMAGE BY CONSTRUCTION EQUIPMENT. THIS AREA MUST BE COMPLETELY STABILIZED. THIS ITEM MUST BE DESIGNED ACCORDING TO CHAPTER 6 OF THE MANUAL FOR EROSION CONTROL IN GEORGIA
	Sr	LINE CODE Sr		
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 CONTROL MEASURES, SEE THE GEORGIA SOIL AND WATER CONSERVATION COMMISSION. "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA".

DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA									
EROSION CONTROL LEGEND AND UNIFORM CODE SHEET SHEET 5 OF 6									
NO SCALE									
JANUARY 2007									
DRAWING No.									
52-005									

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	WID 0208-1		

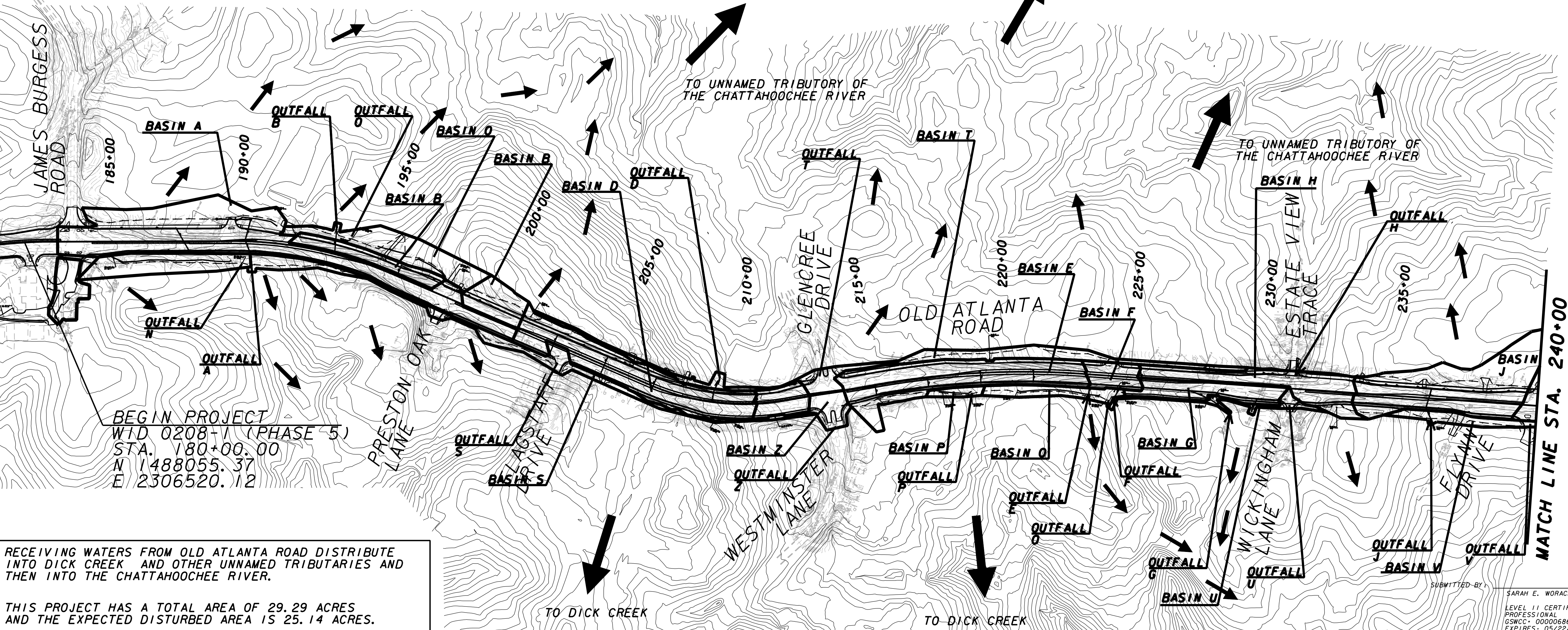
	CODE	PRACTICE STD :SPC's :SECTION	DETAIL	DESCRIPTION
	St	STORM DRAIN OUTLET PROTECTION GA. STD. 1125 & 2332	 LINE CODE St	A PIPE OR BOX CULVERT OUTLET HEADWALL WITH AN APRON AND DISSIPATOR BLOCKS IS USED TO PREVENT EROSION AND TO SLOW WATER. IT IS USED ON THE OUTLET OF ALL BOX CULVERTS AND ON 48" AND LARGER PIPES. MAY BE USED ON INLET FOR FLOWING STREAMS. USE ON SMALL PIPES WHEN OUTLET VELOCITY IS 12 fps AND GREATER.
	St-Rp	STORM DRAIN OUTLET PROTECTION SECTION 603	 PATTERN 	THIS ITEM IS ADDED TO "St" WHEN ADDITIONAL PROTECTION IS NEEDED. TYPE 1 RIP RAP PLACED ON FILTER FABRIC SHOULD BE USED AT A 24" THICKNESS. MAY BE USED ON INLETS FOR FLOWING STREAMS. REFER TO CHARTS IN "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA" FOR QUANTITIY DETERMINATION.
	Su	SURFACE ROUGHENING SERRATED SLOPES CONSTRUCTION DETAIL SECTION 205	 LINE CODE  (LINE CODE Su IS SHOWN ON THE PLANS FOR SERRATED SLOPES WHERE SPECIFIED IN THE SOIL SURVEY.)	PROVIDING A ROUGH SOIL SURFACE WITH HORIZONTAL DEPRESSIONS, BY OPERATING A CLEATED DOZER ON THE SLOPE IN A VERTICAL DIRECTION. CREATING SERRATED SLOPES IN THE GRADING PROCESS TO CONSTRUCT BENCHES WILL REDUCE RUNOFF VELOCITY AND INCREASE INFILTRATION OF WATER. IN MOST CASES THIS ITEM IS NOT REQUIRED TO BE SHOWN ON THE PLANS, BUT REQUIRED TO BE COMPLETED BY THE CONTRACTOR UNDER ALL PROJECTS. IF SERRATED SLOPES ARE USED ON THE PROJECT, THEN THIS ITEM SHALL BE SHOWN WHERE SERRATED SLOPES ARE TO BE USED.
	Trm-1	TURF REINFORCEMENT MAT CONSTRUCTION DETAIL SECTION 711	 LINE CODE 	THIS THREE DIMENSIONAL EROSION CONTROL MAT IS USED IN DITCHES TO STABILIZE THE SOIL BY REINFORCING THE GRASS ROOTS TO PROVIDE LONG-TERM PROTECTION FOR SHEAR STRESSES 0-2 psf. (THIS IS ALSO CALLED "Mb" IN THE MANUAL FOR EROSION & SEDIMENT CONTROL IN GEORGIA.)
	Trm-2	TURF REINFORCEMENT MAT CONSTRUCTION DETAIL SECTION 711	 LINE CODE 	THIS THREE DIMENSIONAL EROSION CONTROL MAT IS USED IN DITCHES TO STABILIZE THE SOIL BY REINFORCING THE GRASS ROOTS TO PROVIDE LONG-TERM PROTECTION FOR SHEAR STRESSES 0-4 psf. (THIS IS ALSO CALLED "Mb" IN THE MANUAL FOR EROSION & SEDIMENT CONTROL IN GEORGIA.)

	CODE	PRACTICE STD :SPC's :SECTION	DETAIL	DESCRIPTION
	Trm-3	TURF REINFORCEMENT MAT CONSTRUCTION DETAIL SECTION 711	 LINE CODE 	THIS THREE DIMENSIONAL EROSION CONTROL MAT IS USED IN DITCHES TO STABILIZE THE SOIL BY REINFORCING THE GRASS ROOTS TO PROVIDE LONG TERM PROTECTION FOR SHEAR STRESSES 0-6 psf. (THIS IS ALSO CALLED "Mb" IN THE MANUAL FOR EROSION & SEDIMENT CONTROL IN GEORGIA.)
	Trm-4	TURF REINFORCEMENT MAT CONSTRUCTION DETAIL SECTION 711	 LINE CODE 	THIS THREE DIMENSIONAL EROSION CONTROL MAT IS USED IN DITCHES TO STABILIZE THE SOIL BY REINFORCING THE GRASS ROOTS TO PROVIDE LONG-TERM PROTECTION FOR SHEAR STRESSES 0-8 psf. (THIS IS ALSO CALLED "Mb" IN THE MANUAL FOR EROSION & SEDIMENT CONTROL IN GEORGIA.)
	Trm-5	TURF REINFORCEMENT MAT CONSTRUCTION DETAIL SECTION 711	 LINE CODE 	THIS THREE DIMENSIONAL EROSION CONTROL MAT IS USED IN DITCHES TO STABILIZE THE SOIL BY REINFORCING THE GRASS ROOTS TO PROVIDE LONG-TERM PROTECTION FOR SHEAR STRESSES 0-10 psf. (THIS IS ALSO CALLED "Mb" IN THE MANUAL FOR EROSION & SEDIMENT CONTROL IN GEORGIA.)
	Trm-6	TURF REINFORCEMENT MAT CONSTRUCTION DETAIL SECTION 711	 LINE CODE 	THIS THREE DIMENSIONAL EROSION CONTROL MAT IS USED IN DITCHES TO STABILIZE THE SOIL BY REINFORCING THE GRASS ROOTS TO PROVIDE LONG-TERM PROTECTION FOR SHEAR STRESSES 0-12 psf. (THIS IS ALSO CALLED "Mb" IN THE MANUAL FOR EROSION & SEDIMENT CONTROL IN GEORGIA.)

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 CONTROL MEASURES, SEE THE GEORGIA SOIL AND WATER CONSERVATION COMMISSION, "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA".

1-24-13	10-2-12							DATE	DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA		
UPDATED DRAWING NO.	ADDED Trm-1,Trm-2,Trm-3, Trm-4,Trm-5,AND Trm-6, CODES AND DESCRIPTIONS, RELOCATED St. & St-Rp CODES TO ECL & UC SHI.	5 of 6.	REVISION	EROSION CONTROL LEGEND AND UNIFORM CODE SHEET SHEET 6 OF 6			NO SCALE		NOV., 2007		
TC	TC					BY	NUMBER EC-L6			DRAWING No. 52-006	

OUTFALL SYSTEM	STATION	OFFSET	STRUCTURE	DIST AREA (AC)	DRNG AREA (AC)	POST								PRE								CPRE	CPOST	AVG. OUTFALL SLOPE
						0+00	0+25	0+50	0+75	1+00	1+25	1+50	1+75	2+00	2+25	2+50	2+75	3+00	3+25	3+50	3+75			
A	190+38	90.5'RT	30" FES	3.79	4.50	24.20	27.55	30.25	32.93	8.36	8.63	8.84	9.02	16.76	19.02	20.85	22.67	5.79	5.96	6.09	6.21	0.51	0.76	6.0%
B	190+36	97.1'LT	18" FES	1.02	1.27	7.12	8.10	8.89	9.68	6.33	6.55	6.71	6.86	4.64	5.26	5.77	6.27	4.12	4.26	4.36	4.45	0.50	0.78	9.9%
D	208+84	92.2'LT	24" FES	2.33	2.25	14.78	16.74	18.27	19.74	7.49	7.71	7.85	7.97	10.49	11.90	13.05	14.18	5.32	5.48	5.61	5.73	0.64	0.87	22.6%
E	223+13	73.0'RT	30" FES	2.81	3.07	17.76	20.04	21.82	23.52	7.56	7.80	7.97	8.13	13.00	14.74	16.17	17.57	5.53	5.74	5.91	6.07	0.58	0.85	33.3%
F	224+06	80.1'RT	18" FES	0.46	0.46	3.15	3.65	4.08	4.53	5.16	5.37	5.53	5.69	2.36	2.67	2.93	3.19	3.86	3.93	3.97	4.00	0.70	0.91	14.6%
G	228+48	107.1'RT	JUNCTION BOX	0.88	0.88	5.15	5.85	6.42	6.98	5.62	5.81	5.95	6.08	3.39	3.84	4.22	4.58	3.70	3.82	3.91	3.99	0.53	0.81	5.0%
H	230+89	47.5'LT	MANHOLE	1.31	1.44	7.68	8.76	9.62	10.46	12.72	13.18	13.51	13.81	5.05	5.72	6.28	6.82	8.36	8.61	8.81	9.01	0.48	0.87	4.2%
J	236+04	71.0'RT	24" FES	1.80	3.05	14.63	16.66	18.29	19.91	7.44	7.68	7.85	7.99	10.47	11.88	13.03	14.16	5.33	5.48	5.59	5.68	0.47	0.68	2.8%
K	257+22	90.9'LT	30" FES	3.74	3.95	22.03	27.63	27.63	30.07	8.39	8.66	8.85	9.01	16.14	18.30	20.07	21.82	6.15	5.74	6.43	6.54	0.56	0.86	10.9%
L	242+40	67.3'RT	18" FES	0.14	0.14	0.94	1.18	1.18	1.28	3.60	3.73	3.83	3.93	0.51	0.58	0.63	0.69	1.95	1.82	2.05	2.11	0.49	0.91	6.4%
M	261+00	37.4'RT	CATCH BASIN	0.91	2.28	12.79	14.51	15.91	17.30	11.71	12.03	12.23	12.39	7.48	8.46	9.30	10.11	6.84	7.03	7.15	7.24	0.45	0.77	3.4%
N	190+00	84.1'RT	DITCH	0.41	1.03	3.76	4.26	4.68	5.08	2.24	2.40	2.51	2.63	3.76	4.26	4.68	5.08	2.24	2.40	2.51	2.63	0.50	0.50	11.6%
O	194+00	81.6'LT	DITCH	0.52	1.34	4.30	4.88	5.35	5.82	1.99	2.13	2.23	2.33	4.21	4.77	5.23	5.69	1.94	2.08	2.18	2.28	0.43	0.44	7.3%
P	218+50	67.4'RT	DITCH	0.09	0.16	0.55	0.62	0.68	0.74	0.56	0.61	0.65	0.69	0.55	0.62	0.68	0.74	0.56	0.61	0.65	0.69	0.47	0.47	7.1%
Q	224+00	95.1'RT	DITCH	0.30	0.51	1.68	1.90	2.08	2.27	1.32	1.36	1.41	1.44	1.68	1.90	2.08	2.27	1.32	1.36	1.41	1.44	0.45	0.45	7.2%
R	246+75	94.2'LT	DITCH	1.12	6.97	22.90	25.97	28.48	30.96	2.58	2.67	2.73	2.78	24.42	27.70	30.38	33.02	2.75	2.85	2.91	2.97	0.48	0.45	0.8%
S	203+00	RT	SHEET FLOW	0.59	1.15	4.11	4.67	5.12	5.56	NA	NA	NA	NA	NA	NA	3.95	4.48	4.91	5.33	NA	NA	NA	NA	NA
T	213+00	LT	SHEET FLOW	0.73	1.57	5.50	6.24	6.84	7.44	NA	NA	NA	NA	NA	NA	5.16	5.85	6.42	6.97	NA	NA	NA	NA	NA
U	230+50	RT	SHEET FLOW	0.13	0.30	1.16	1.32	1.44	1.57	NA	NA	NA	NA	NA	NA	1.05	1.19	1.31	1.42	NA	NA	NA	NA	NA
V	240+00	RT	SHEET FLOW	0.52	0.77	2.98	3.38	3.71	4.03	NA	NA	NA	NA	NA	NA	2.87	3.25	3.57	3.88	NA	NA	NA	NA	NA
W	224+50	RT	SHEET FLOW	0.09	0.20	0.60	0.68	0.74	0.81	NA	NA	NA	NA	NA	NA	0.60	0.68	0.74	0.81	NA	NA	NA	NA	NA
X	253+00	LT	SHEET FLOW	0.67	1.10	4.42	5.01	5.49	5.97	NA	NA	NA	NA	NA	NA	3.77	4.28	4.69	5.10	NA	NA	NA	NA	NA
Z	213+00	RT	SHEET FLOW	0.37	0.38	2.39	2.71	2.97	3.23	NA	NA	NA	NA	NA	NA	2.27	2.58	2.83	3.08	NA	NA	NA	NA	NA



RECEIVING WATERS FROM OLD ATLANTA ROAD DISTRIBUTE INTO DICK CREEK AND OTHER UNNAMED TRIBUTARIES AND THEN INTO THE CHATTAHOOCHEE RIVER.

THIS PROJECT HAS A TOTAL AREA OF 29.29 ACRES AND THE EXPECTED DISTURBED AREA IS 25.14 ACRES.



GRESHAM
SMITH AND
PARTNERS



REVISION DATES	

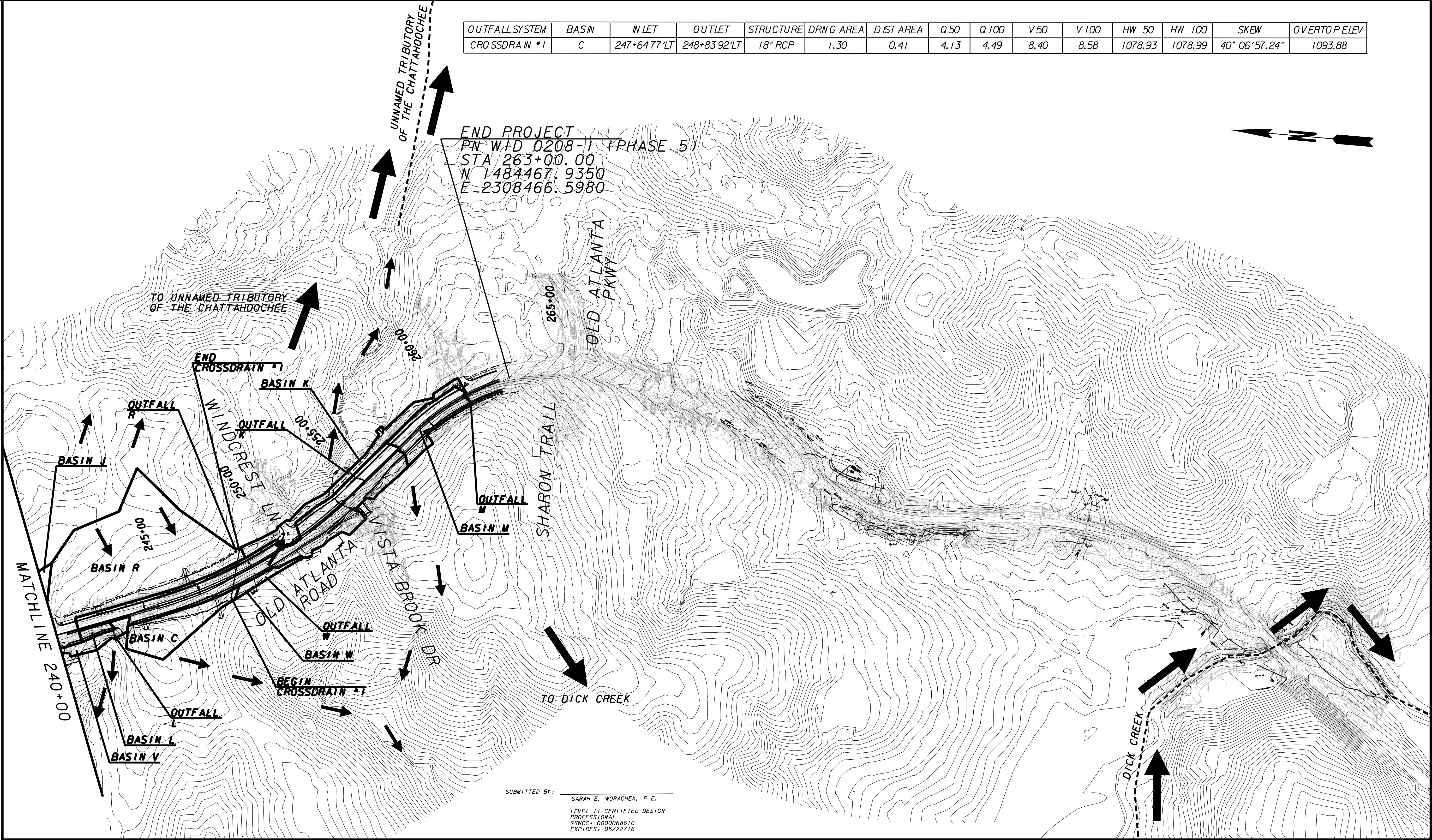
FORSYTH COUNTY
ENGINEERING DEPARTMENT

**EROSION CONTROL
DRAINAGE AREA MAP**

WID 0208-1 (PHASE 3)
FORSYTH COUNTY

DRAWING No.
53-01

OUTFALL SYSTEM	BASIN	IN LET	OUTLET	STRUCTURE	DRNG AREA	DIST AREA	Q 50	Q 100	V 50	V 100	HW 50	HW 100	SKEW	OVERTOP ELEV
CROSS DRAIN #1	C	247+64.77 LT	248+83.92 LT	18" RCP	1.30	0.41	4.13	4.49	8.40	8.58	1078.93	1078.99	40° 06' 57.24"	1093.88



SUBMITTED BY: SARAH E. WORACHEK, P.E.
LEVEL 11 CERTIFIED DESIGN
PROFESSIONAL
GSWC: 000068610
EXPIRES: 05/22/16



GRESHAM
SMITH AND
PARTNERS



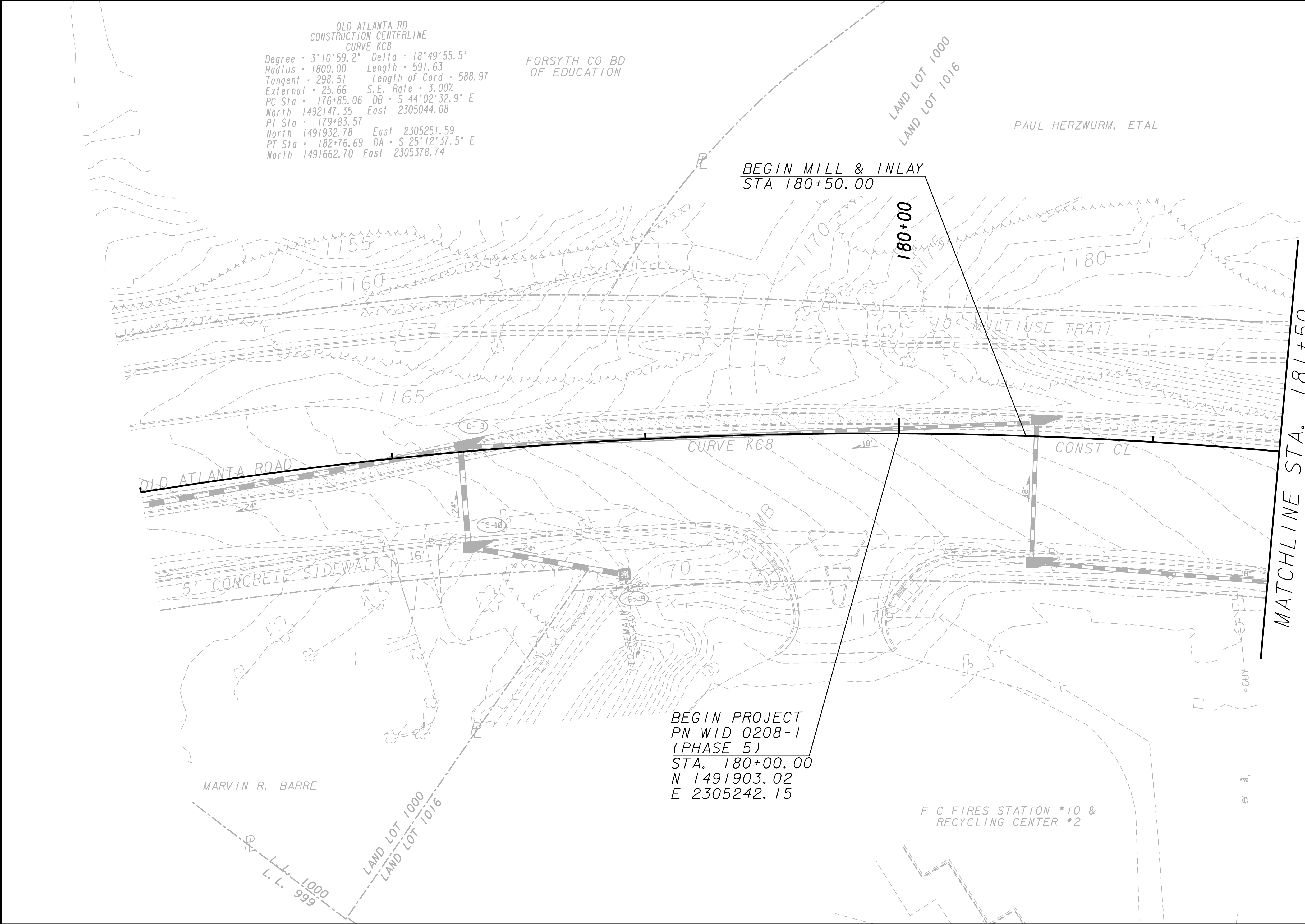
REVISION DATES

FORSYTH COUNTY
ENGINEERING DEPARTMENT

EROSION CONTROL
DRAINAGE AREA MAP

WID 0208-1 (PHASE 3)
FORSYTH COUNTY

DRAWING No.
53-02



SUBMITTED BY: SARAH E. WORACHEK, P. E.
LEVEL 11 CERTIFIED DESIGN
GSWCC: 000068610
EXPIRES: 5/22/16

EXISTING R/W & PROPERTY LINE

REQUIRED R/W LINE

CONSTRUCTION LIMITS

EASEMENT FOR CONSTRUCTION
& MAINT. OF SLOPES & UTILITIES

EASEMENT FOR CONSTR OF SLOPES

EASEMENT FOR CONSTR OF DRIVES

BEGIN LIMIT OF ACCESSBLA

END LIMIT OF ACCESSELA

LIMIT OF ACCESS

R/W AND LIMIT OF ACCESS

GRESHAM
SMITH AND
PARTNERS

SCALE IN FEET

0 20 40 80

REVISION DATES

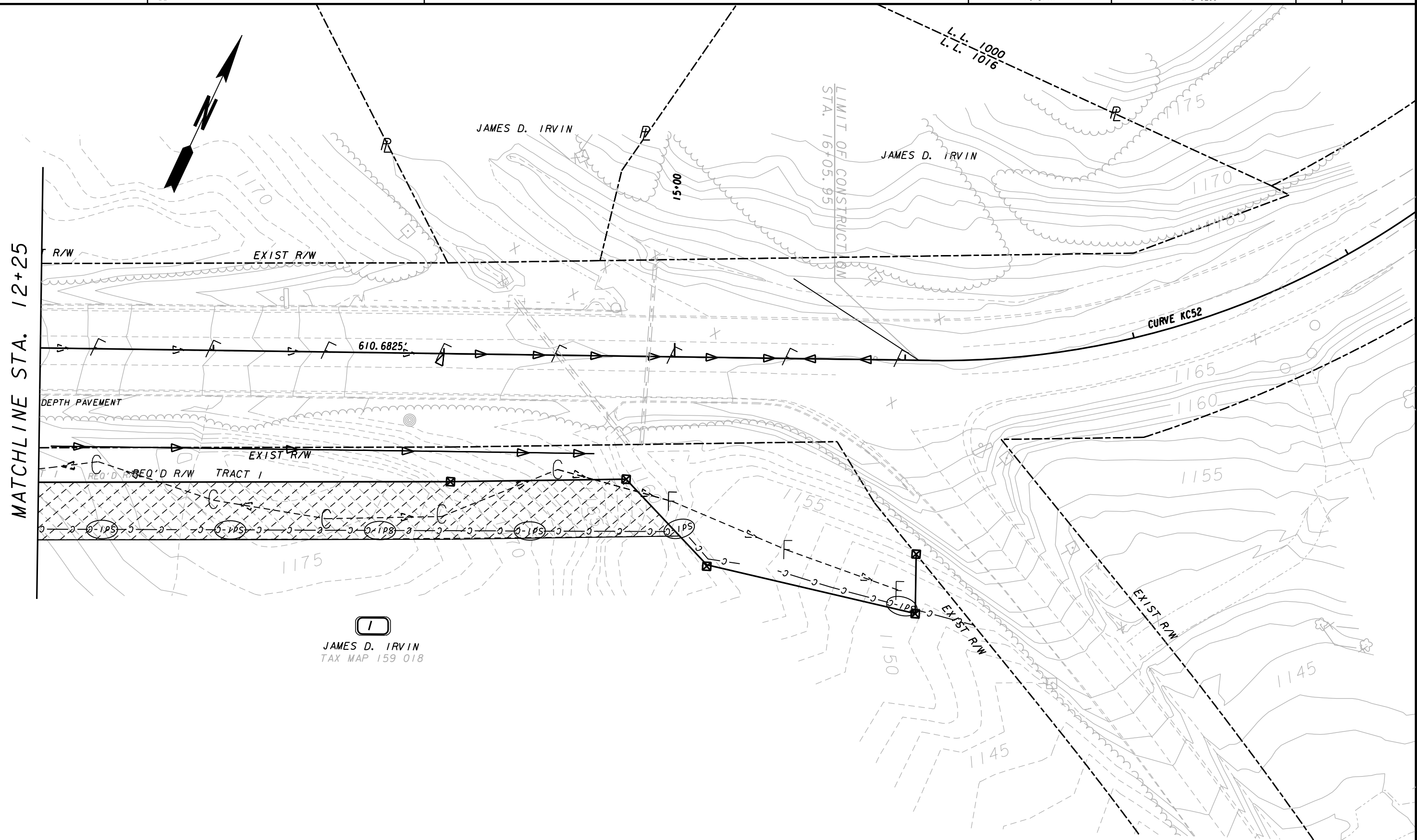
FORSYTH COUNTY
ENGINEERING DEPARTMENT




BMP LOCATION DETAILS
STAGE 1A

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
54-01

DRAWING No.
4-02



EXISTING R/W & PROPERTY LINE	----
REQUIRED R/W LINE	=====
CONSTRUCTION LIMITS	—C—F—
EASEMENT FOR CONSTRUCTION & MAINT. OF SLOPES & UTILITIES	
EASEMENT FOR CONSTR OF SLOPES	
EASEMENT FOR CONSTR OF DRIVES	

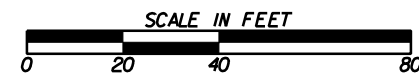
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BEGIN LIMIT OF ACCESS .....BLA
END LIMIT OF ACCESS .....ELA
LIMIT OF ACCESS .....ooo ooo
R/W AND LIMIT OF ACCESS .....III III

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G R E S H A M
S M I T H A N D
P A R T N E R S

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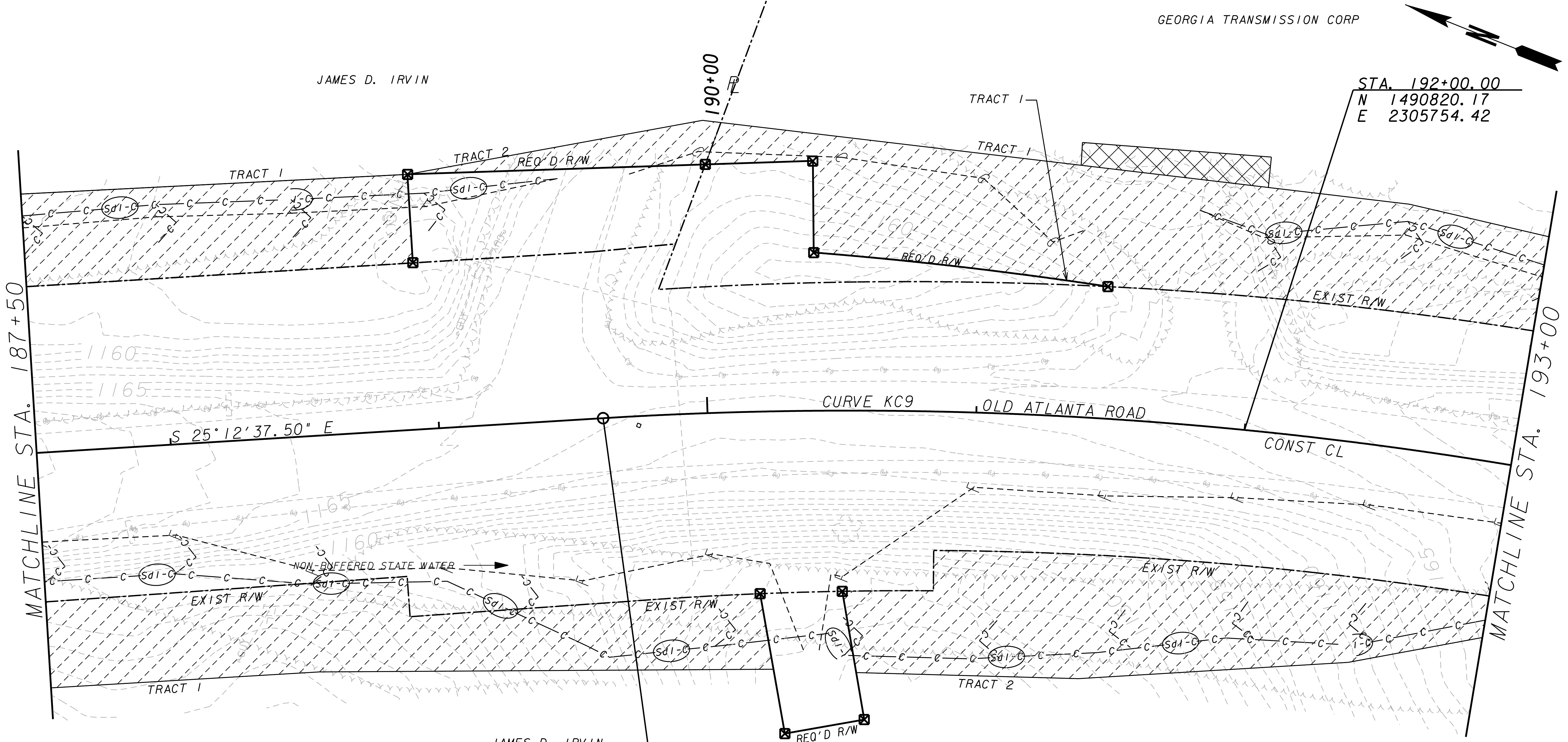
FORSYTH COUNTY
ENGINEERING DEPARTMENT

BMP LOCATION DETAILS

JAMES BURGESS ROAD

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
4-02A



PC STA. 189+61.11
N 1491043.47
E 2305670.27

OLD ATLANTA RD
CONSTRUCTION CENTERLINE
CURVE KC9
Degree = 3°49'10.99" Delta = 23°29'14.80"
Radius = 1500.00 Length = 614.90
Tangent = 311.83 Length of Cord = 610.60
External = 32.07 S.E. Rate = 3.25%
PC Sta = 189+61.11 DB = S 25°12'37.50" E
North 1491043.47 East 2305670.27
PI Sta = 192+72.94
North 1490761.34 East 2305803.09
PT Sta = 195+76.01 DA = S 1°43'22.70" E
North 1490449.65 East 2305812.46

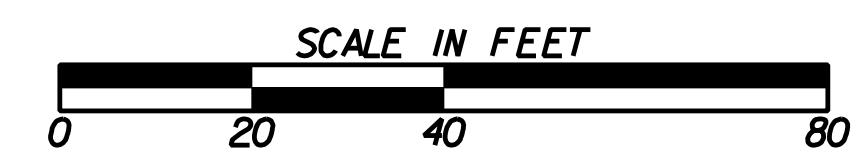
SUBMITTED BY: SARAH E. WORACHEK, P.E.
LEVEL 11 CERTIFIED DESIGN
CSWCC: 0000068610
EXPIRES: 5/22/16

- EXISTING R/W & PROPERTY LINE
- REQUIRED R/W LINE
- CONSTRUCTION LIMITS
- EASEMENT FOR CONSTRUCTION & MAINT. OF SLOPES & UTILITIES
- EASEMENT FOR CONSTR OF SLOPES
- EASEMENT FOR CONSTR OF DRIVES

- BEGIN LIMIT OF ACCESS
- END LIMIT OF ACCESS
- LIMIT OF ACCESS
- R/W AND LIMIT OF ACCESS



GRESHAM
SMITH AND
PARTNERS



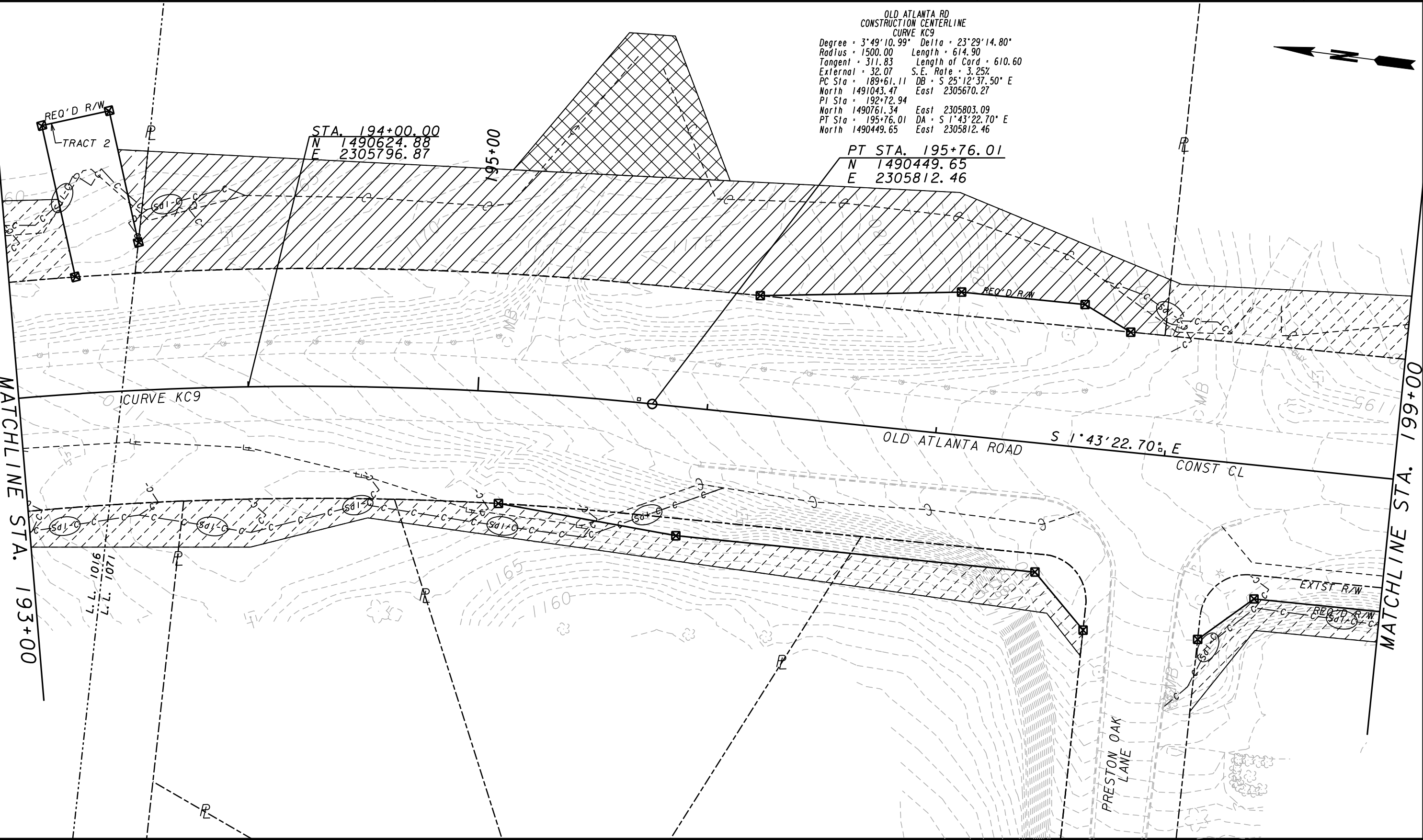
REVISION DATES		

FORSYTH COUNTY
ENGINEERING DEPARTMENT

**BMP LOCATION DETAILS
STAGE 1A**

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
54-03



- EXISTING R/W & PROPERTY LINE
REQUIRED R/W LINE
CONSTRUCTION LIMITS
EASEMENT FOR CONSTRUCTION
& MAINT. OF SLOPES & UTILITIES
EASEMENT FOR CONSTR OF SLOPES
EASEMENT FOR CONSTR OF DRIVES
-

BEGIN LIMIT OF ACCESSBLA
END LIMIT OF ACCESSELA
LIMIT OF ACCESS
R/W AND LIMIT OF ACCESS



G R E S H A M
S M I T H A N D
P A R T N E R S



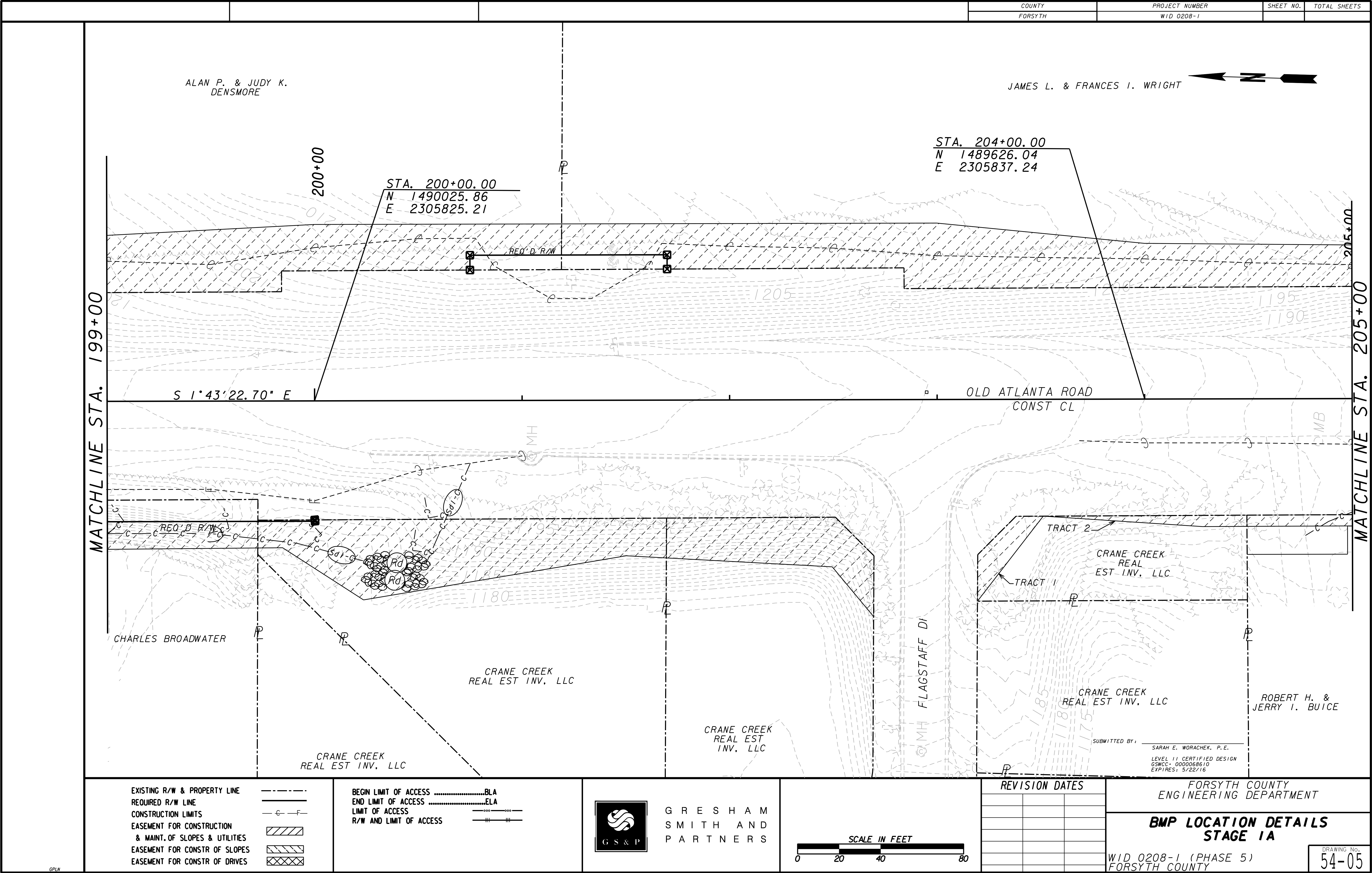
REVISION DATES		
4-17-20		

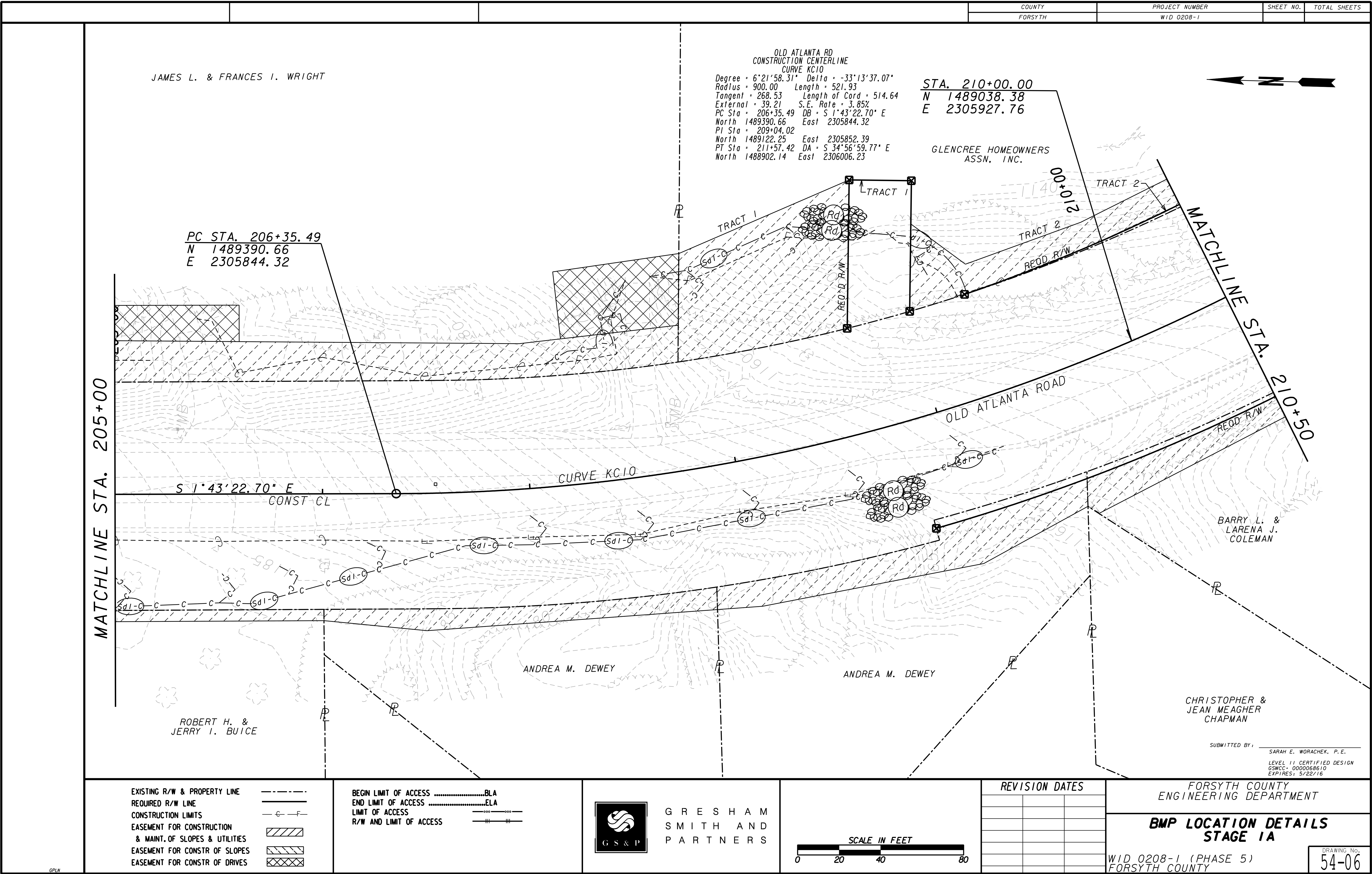
FORSYTH COUNTY
ENGINEERING DEPARTMENT

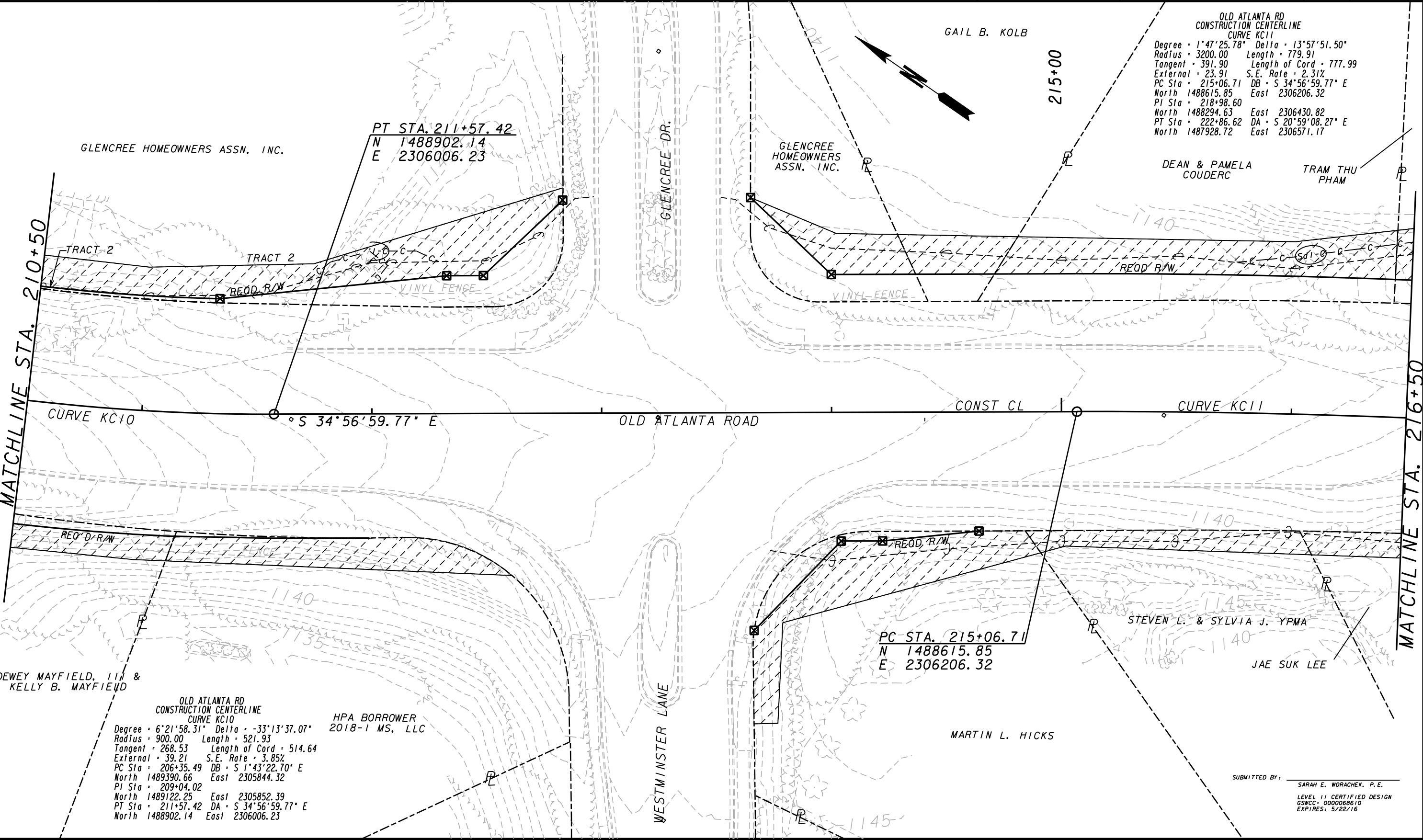
BMP LOCATION DETAILS
STAGE 1A

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
54-04







- EXISTING R/W & PROPERTY LINE
REQUIRED R/W LINE
CONSTRUCTION LIMITS
EASEMENT FOR CONSTRUCTION
& MAINT. OF SLOPES & UTILITIES
EASEMENT FOR CONSTR OF SLOPES
EASEMENT FOR CONSTR OF DRIVES

- BEGIN LIMIT OF ACCESS
END LIMIT OF ACCESS
LIMIT OF ACCESS
R/W AND LIMIT OF ACCESS



G R E S H A M
S M I T H A N D
P A R T N E R S



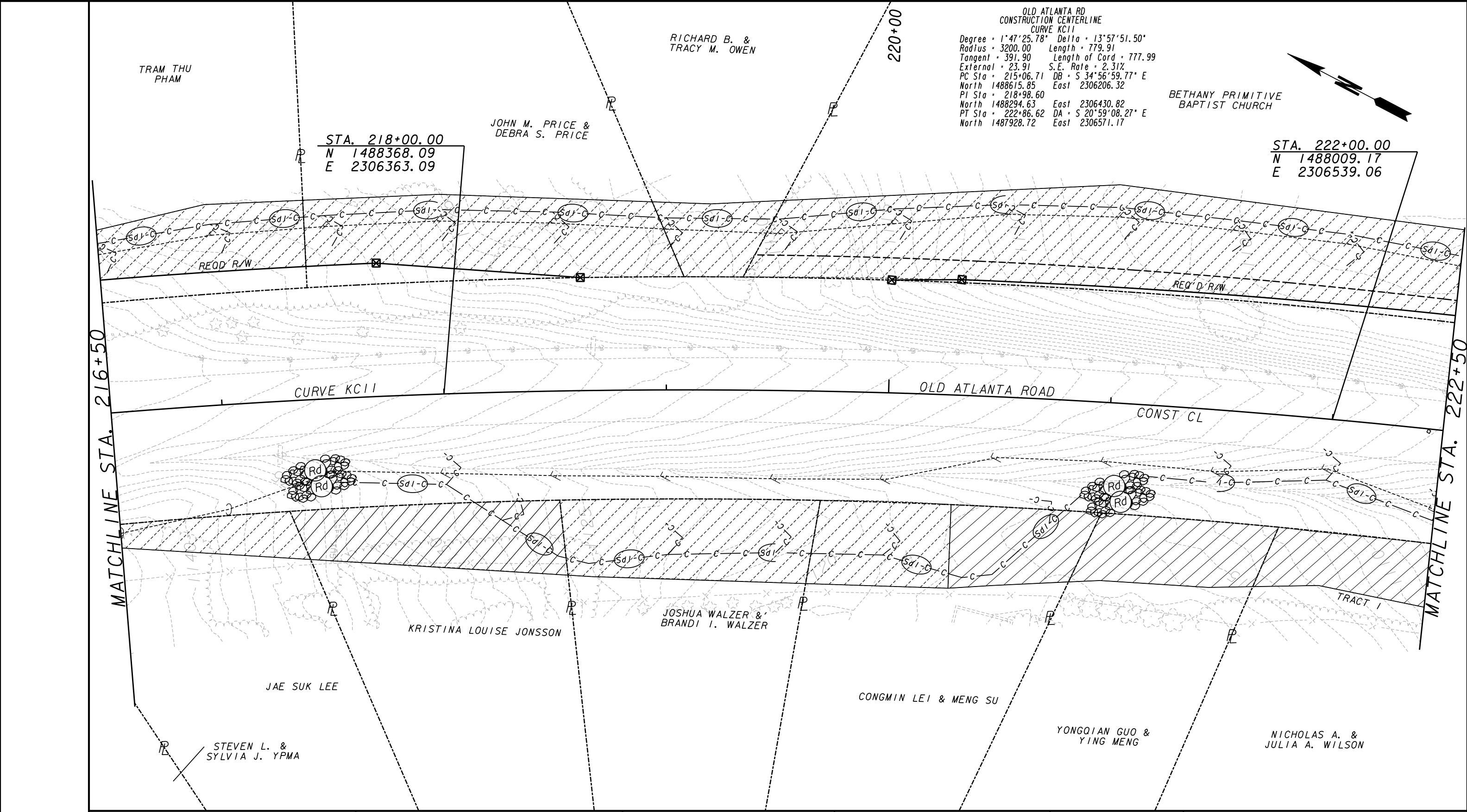
REVISION DATES		

FORSYTH COUNTY
ENGINEERING DEPARTMENT

BMP LOCATION DETAILS
STAGE 1A

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
54-07



EXISTING R/W & PROPERTY LINE
REQUIRED R/W LINE
CONSTRUCTION LIMITS
EASEMENT FOR CONSTRUCTION & MAINT. OF SLOPES & UTILITIES
EASEMENT FOR CONSTR OF SLOPES
EASEMENT FOR CONSTR OF DRIVES

BEGIN LIMIT OF ACCESS
END LIMIT OF ACCESS
LIMIT OF ACCESS
R/W AND LIMIT OF ACCESS

G R E S H A M
S M I T H A N D
P A R T N E R S

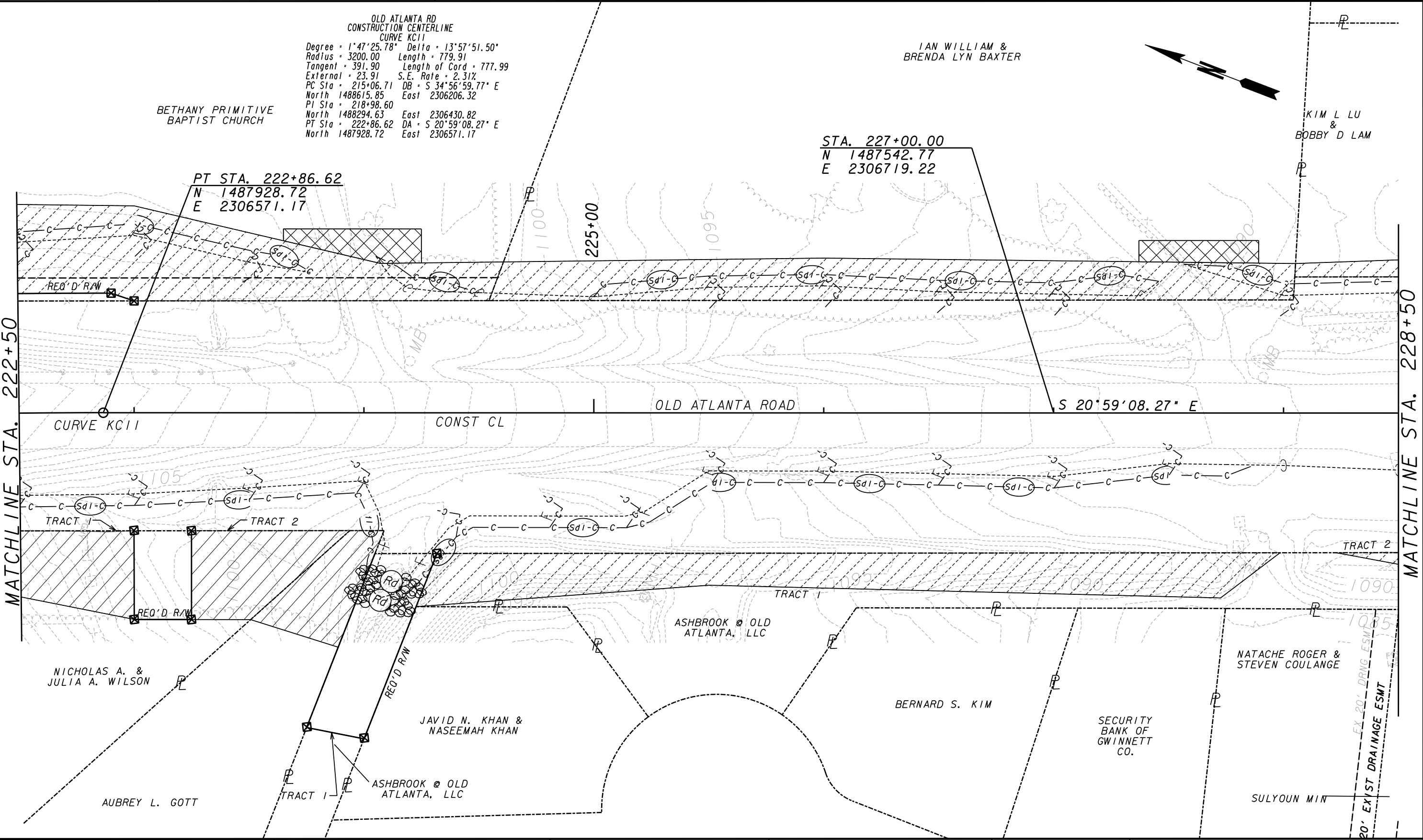
SCALE IN FEET
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REVISION DATES
4-17-20

FORSYTH COUNTY
ENGINEERING DEPARTMENT
**BMP LOCATION DETAILS
STAGE 1A**
WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
54-08

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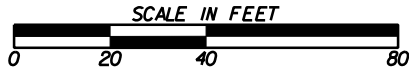


EXISTING R/W & PROPERTY LINE
REQUIRED R/W LINE
CONSTRUCTION LIMITS
EASEMENT FOR CONSTRUCTION
& MAINT. OF SLOPES & UTILITIES
EASEMENT FOR CONSTR OF SLOPES
EASEMENT FOR CONSTR OF DRIVES

BEGIN LIMIT OF ACCESS
END LIMIT OF ACCESS
LIMIT OF ACCESS
R/W AND LIMIT OF ACCESS



G R E S H A M
S M I T H A N D
P A R T N E R S



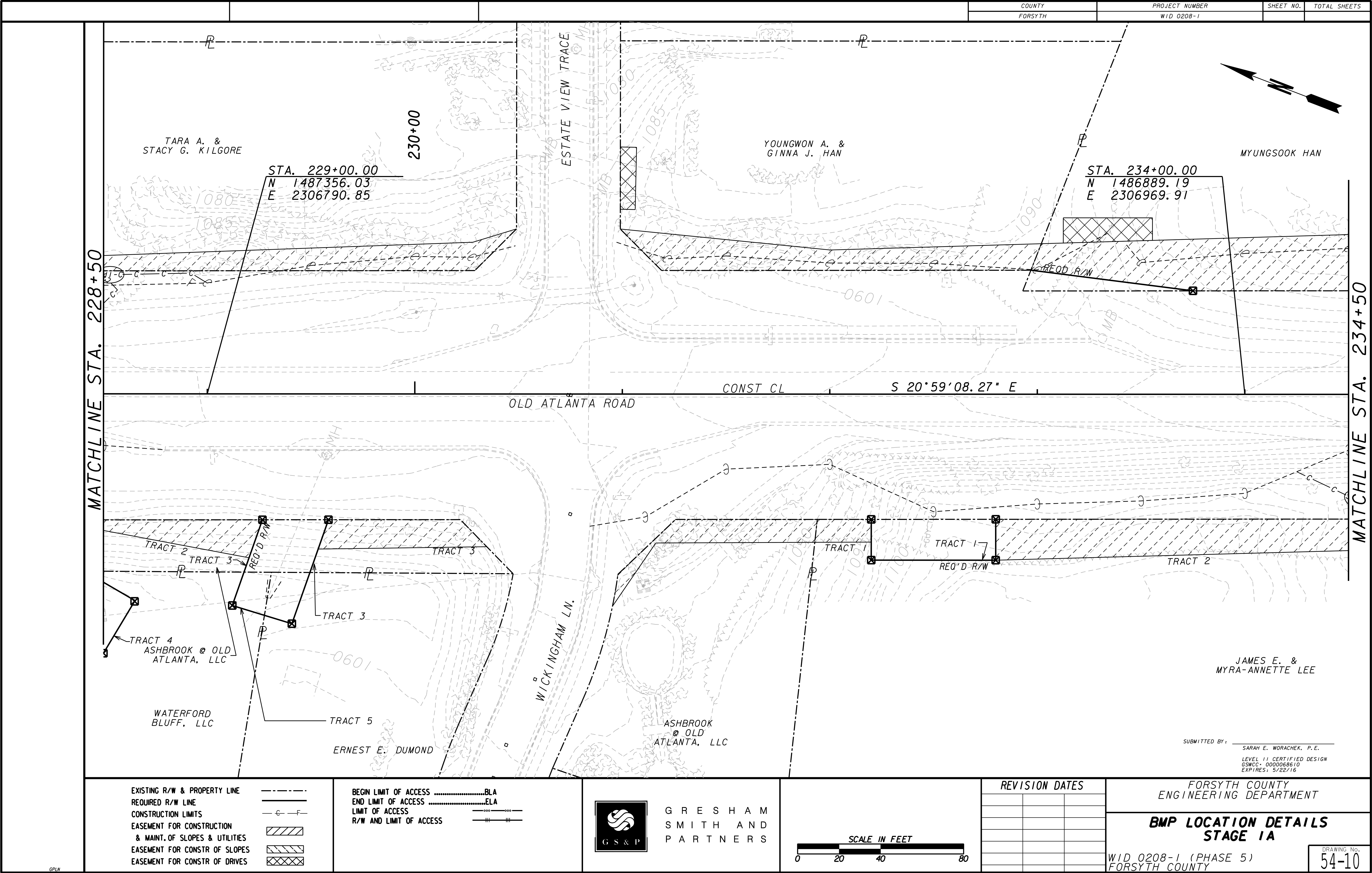
REVISION DATES		
4-17-20		

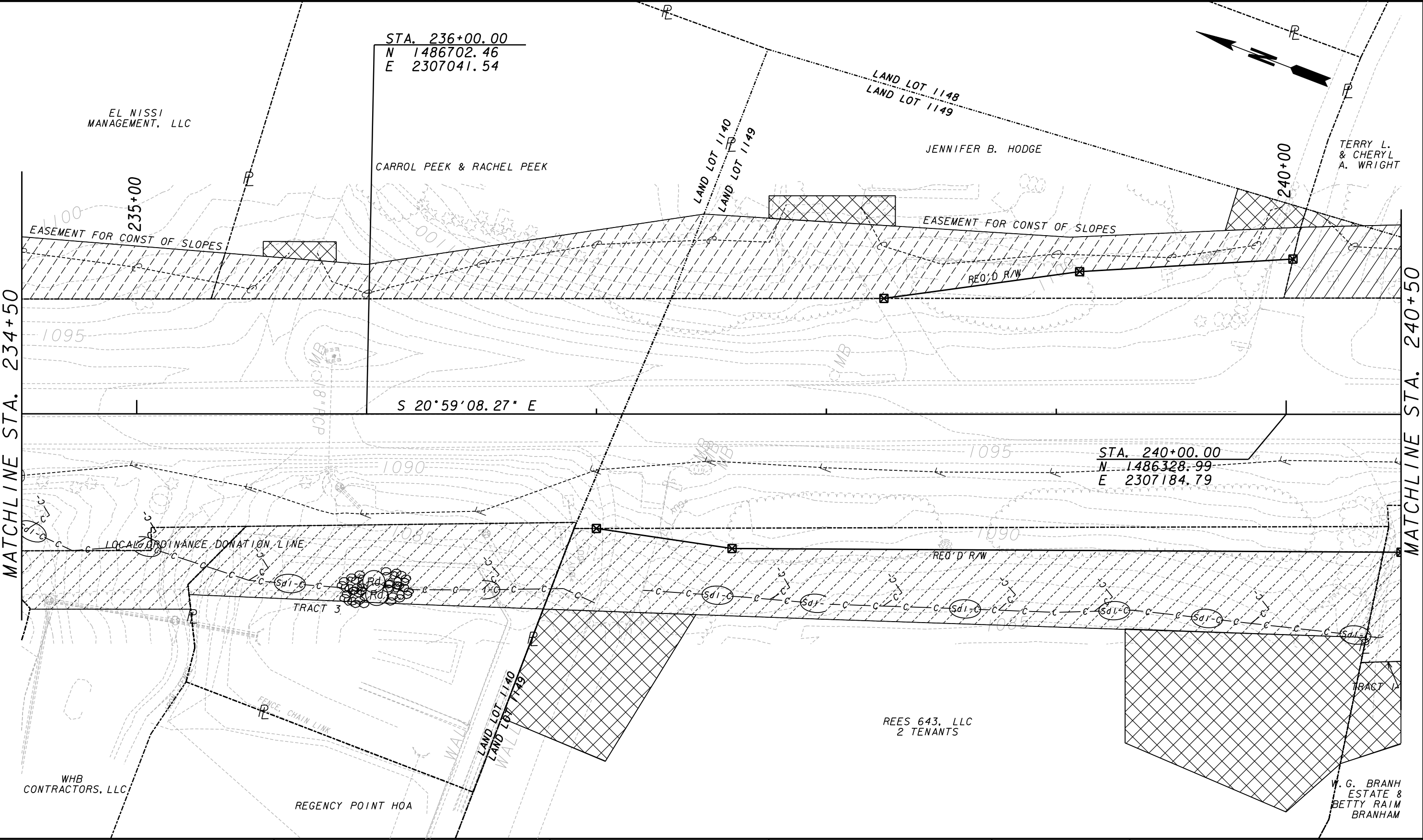
FORSYTH COUNTY
ENGINEERING DEPARTMENT

BMP LOCATION DETAILS
STAGE 1A

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
54-09



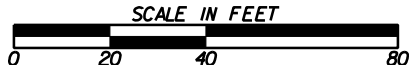


- EXISTING R/W & PROPERTY LINE
REQUIRED R/W LINE
CONSTRUCTION LIMITS
EASEMENT FOR CONSTRUCTION
& MAINT. OF SLOPES & UTILITIES
EASEMENT FOR CONST OF SLOPES
EASEMENT FOR CONST OF DRIVES

- BEGIN LIMIT OF ACCESS
END LIMIT OF ACCESS
LIMIT OF ACCESS
R/W AND LIMIT OF ACCESS



G R E S H A M
S M I T H A N D
P A R T N E R S



REVISION DATES		
4-17-20		

FORSYTH COUNTY
ENGINEERING DEPARTMENT

BMP LOCATION DETAILS
STAGE 1A

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
54-11

TERRY L.
& CHERYL A.
WRIGHT

245+00

ESMT FOR CONST OF DRAINAGE

OLD ATLANTA ROAD

CONST CL

CURVE KC12

TRACT 1

~~REQ'D R/W~~

TRACT 2

BENJI DR.

TRACT 1

TRACT 2

HUSSAIN ALI &
GULZAR RAHMAN

OLD ATLANTA RD
CONSTRUCTION CENTERLINE
CURVE KC12

Degree = 2°51'53.24"	Della = -28°17'04.18"
Radius = 2000.00	Length = 987.32
Tangent = 503.93	Length of Cord = 977.32
External = 62.51	S.E. Rate = 2.87%
PC Sta = 244+53.39	DB = S 20°59'08.27" E
North 1485905.67	East 2307347.17
PI Sta = 249+57.33	
North 1485435.16	East 2307527.65
PT Sta = 254+40.71	DA = S 49°46'12.44" E
North 1485106.35	East 2307909.52

PC STA.	244+53.39
N	1485905.67
E	2307347.17

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BEGIN LIMIT OF ACCESS .....BLA
END LIMIT OF ACCESS .....ELA
LIMIT OF ACCESS                ---|---|---|
R/W AND LIMIT OF ACCESS        ---||---||---|

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SCALE IN FEET

REVISION DATES

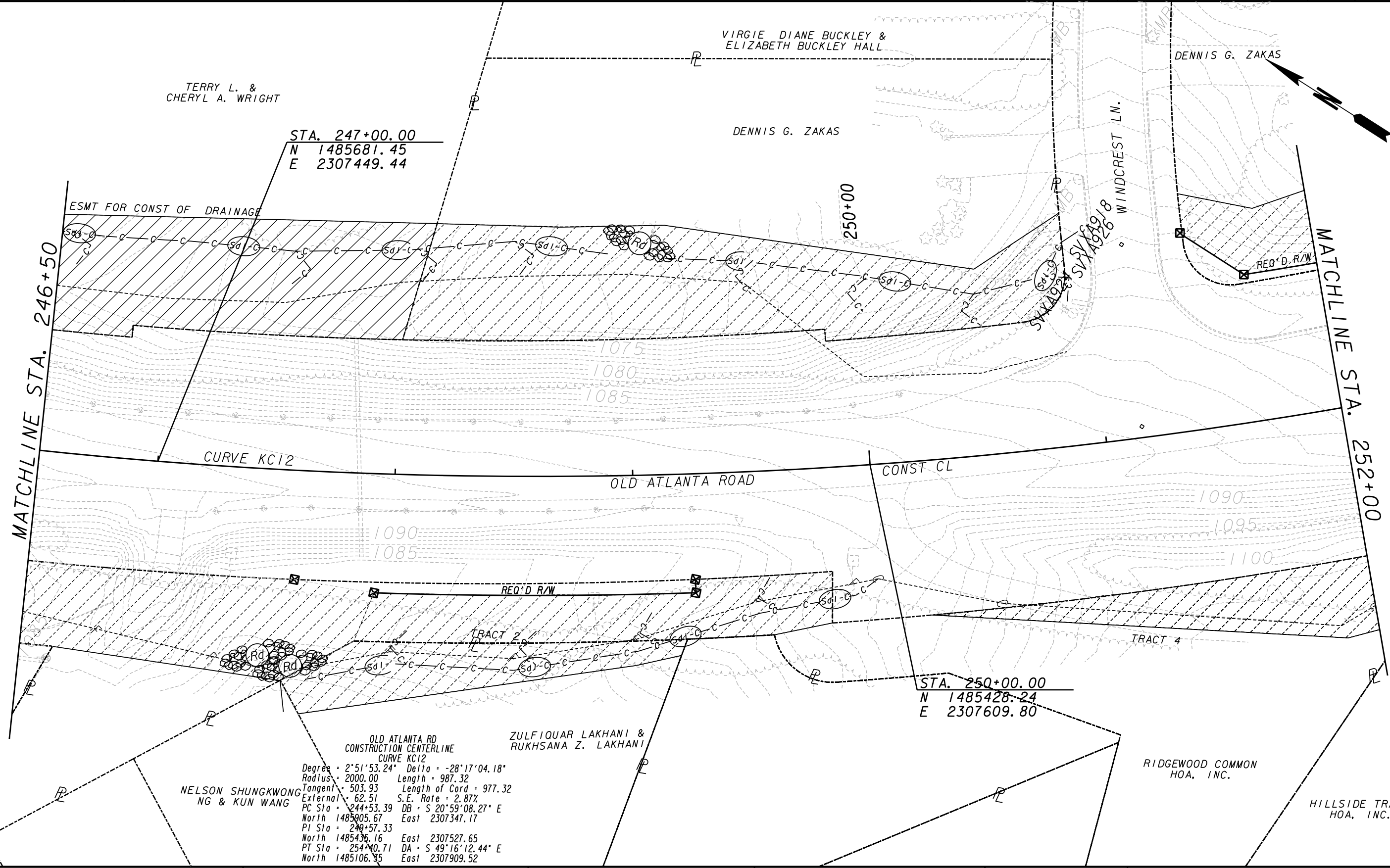
4-17-20

FORSYTH COUNTY
ENGINEERING DEPARTMENT

BMP LOCATION DETAILS STAGE 1A

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
4-12



EXISTING R/W & PROPERTY LINE

REQUIRED R/W LINE

CONSTRUCTION LIMITS

EASEMENT FOR CONSTRUCTION & MAINT. OF SLOPES & UTILITIES

EASEMENT FOR CONSTR OF SLOPES

EASEMENT FOR CONSTR OF DRIVES

BEGIN LIMIT OF ACCESS

END LIMIT OF ACCESS

LIMIT OF ACCESS

R/W AND LIMIT OF ACCESS

GRESHAM
SMITH AND
PARTNERS

SCALE IN FEET

REVISION DATES

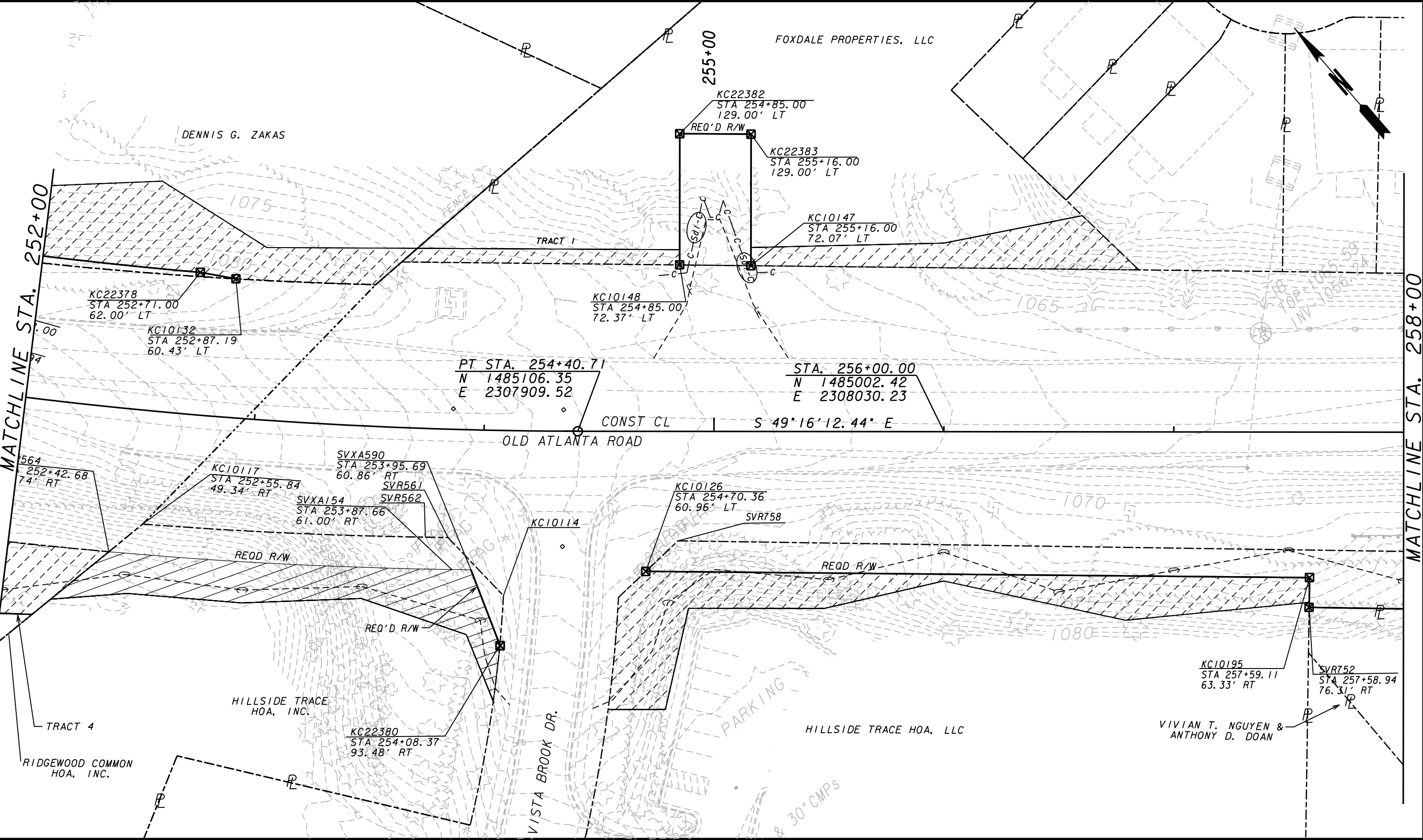
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FORSYTH COUNTY
ENGINEERING DEPARTMENT

BMP LOCATION DETAILS
STAGE 1A

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
54-13



- EXISTING R/W & PROPERTY LINE
REQUIRED R/W LINE
CONSTRUCTION LIMITS
EASEMENT FOR CONSTRUCTION
& MAINT. OF SLOPES & UTILITIES
EASEMENT FOR CONSTR OF SLOPES
EASEMENT FOR CONSTR OF DRIVES
-

BEGIN LIMIT OF ACCESSBLA
END LIMIT OF ACCESSELA
LIMIT OF ACCESS
R/W AND LIMIT OF ACCESS



G R E S H A M
S M I T H A N D
P A R T N E R S



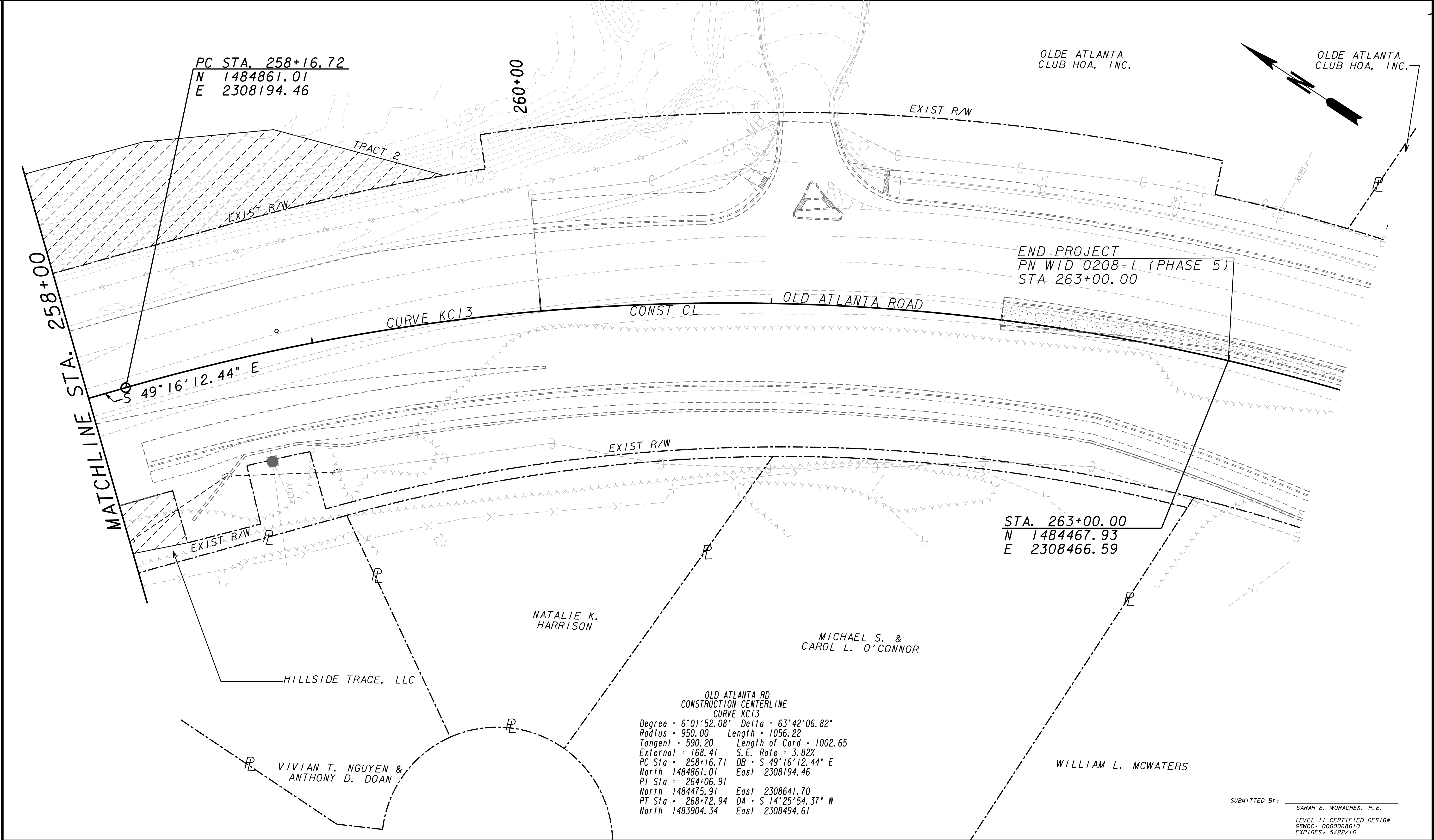
REVISION DATES		
4-17-20		

FORSYTH COUNTY
ENGINEERING DEPARTMENT

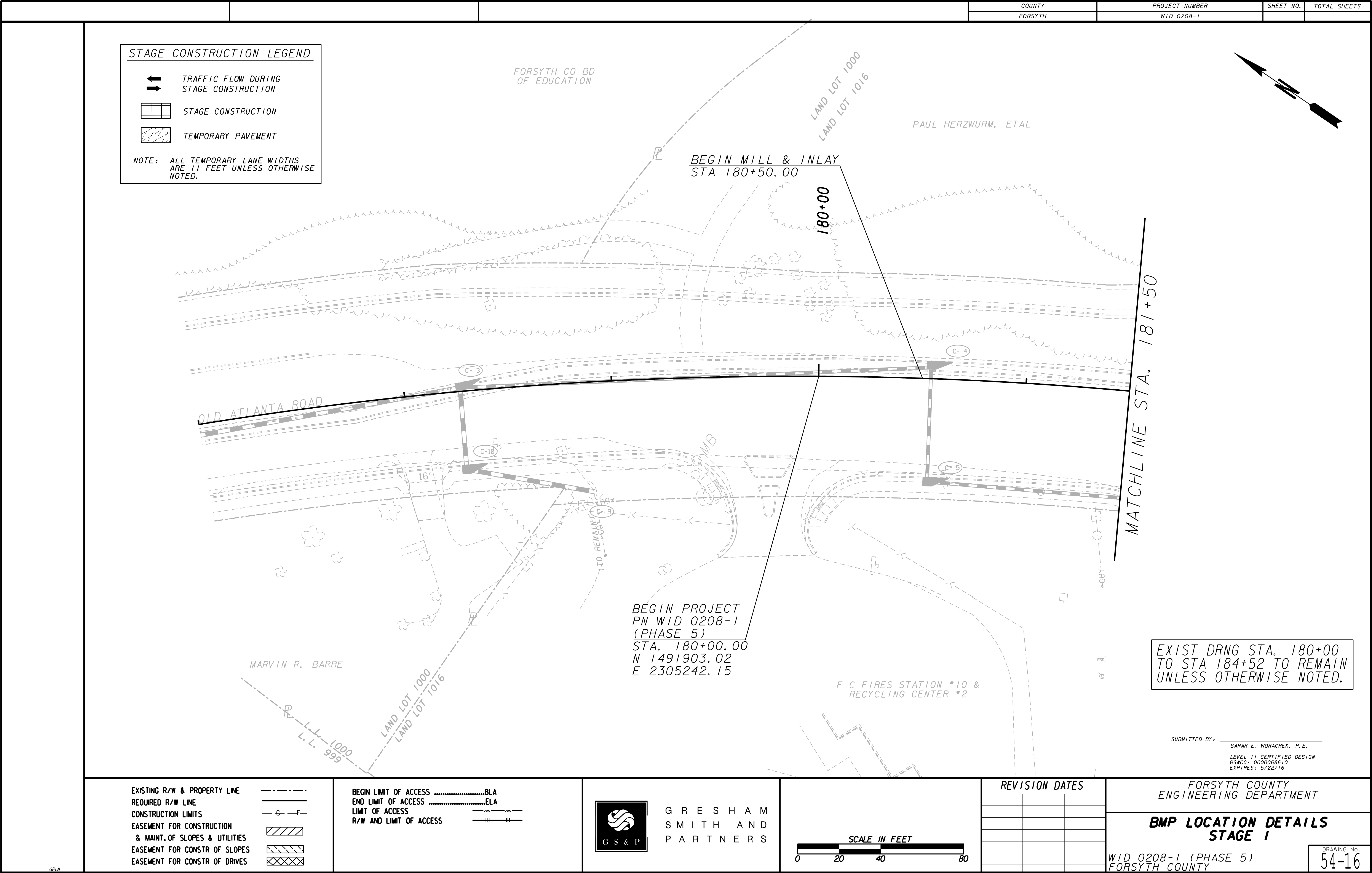
BMP LOCATION DETAILS
STAGE 1A

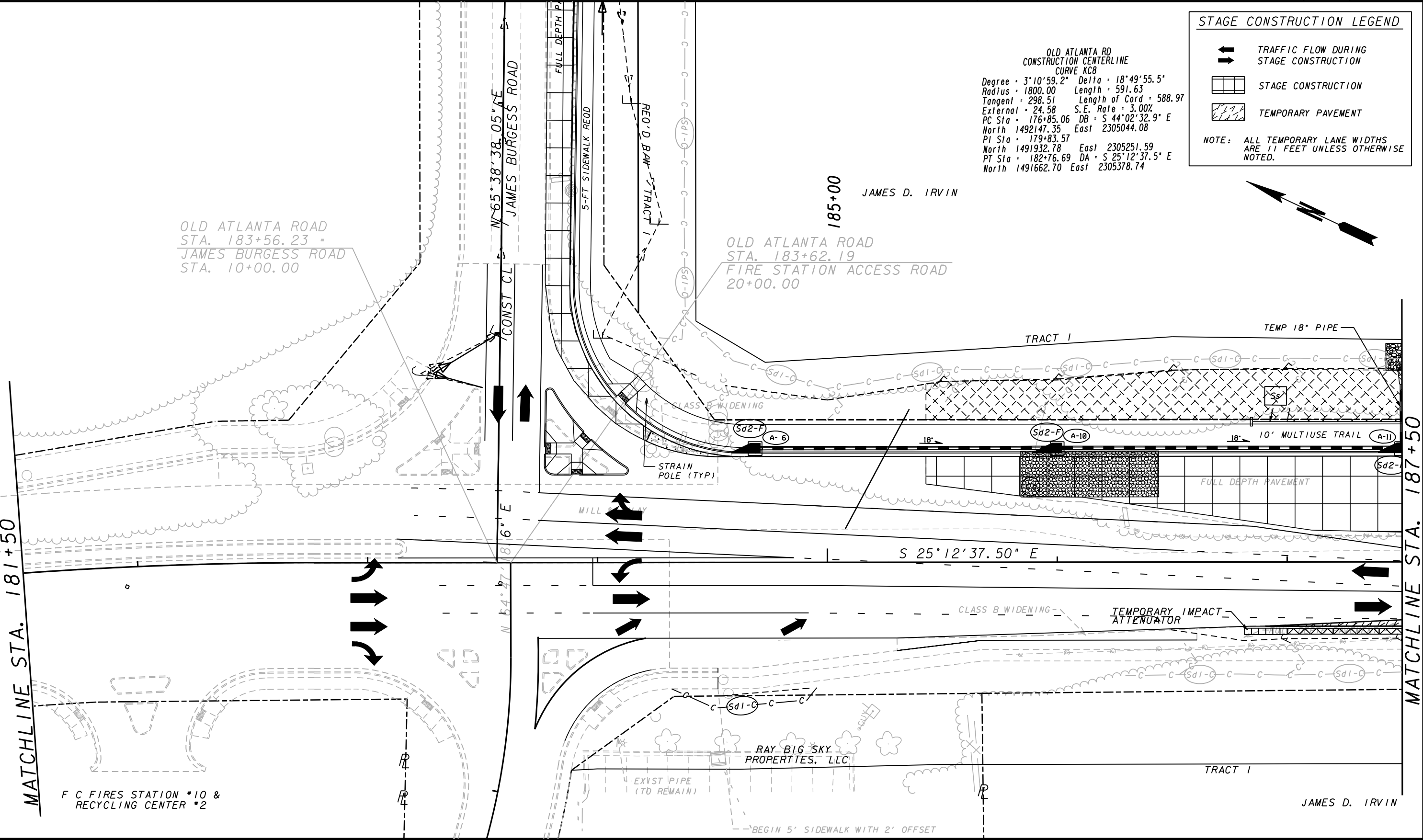
WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
54-14



<p>EXISTING R/W & PROPERTY LINE</p> <p>REQUIRED R/W LINE</p> <p>CONSTRUCTION LIMITS</p> <p>EASEMENT FOR CONSTRUCTION & MAINT. OF SLOPES & UTILITIES</p> <p>EASEMENT FOR CONSTR OF SLOPES</p> <p>EASEMENT FOR CONSTR OF DRIVES</p>	<p>BEGIN LIMIT OF ACCESSBLA</p> <p>END LIMIT OF ACCESSELA</p> <p>LIMIT OF ACCESS</p> <p>R/W AND LIMIT OF ACCESS</p>	<p>GRESHAM SMITH AND PARTNERS</p>	<p>SCALE IN FEET</p> <p>0 20 40 80</p>	<table><tr><th colspan="3">REVISION DATES</th></tr><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr></table>	REVISION DATES																					<p>FORSYTH COUNTY ENGINEERING DEPARTMENT</p> <p>BMP LOCATION DETAILS STAGE 1A</p> <p>WID 0208-1 (PHASE 5) FORSYTH COUNTY</p> <p>DRAWING No. 54-15</p>
REVISION DATES																										





STAGE CONSTRUCTION LEGEND

- TRAFFIC FLOW DURING STAGE CONSTRUCTION
- STAGE CONSTRUCTION
- TEMPORARY PAVEMENT

NOTE: ALL TEMPORARY LANE WIDTHS ARE 11 FEET UNLESS OTHERWISE NOTED.

- EXISTING R/W & PROPERTY LINE
REQUIRED R/W LINE
CONSTRUCTION LIMITS
EASEMENT FOR CONSTRUCTION & MAINT. OF SLOPES & UTILITIES
EASEMENT FOR CONSTR. OF SLOPES
EASEMENT FOR CONSTR. OF DRIVES

- BEGIN LIMIT OF ACCESS
END LIMIT OF ACCESS
LIMIT OF ACCESS
R/W AND LIMIT OF ACCESS



GRESHAM
SMITH AND
PARTNERS



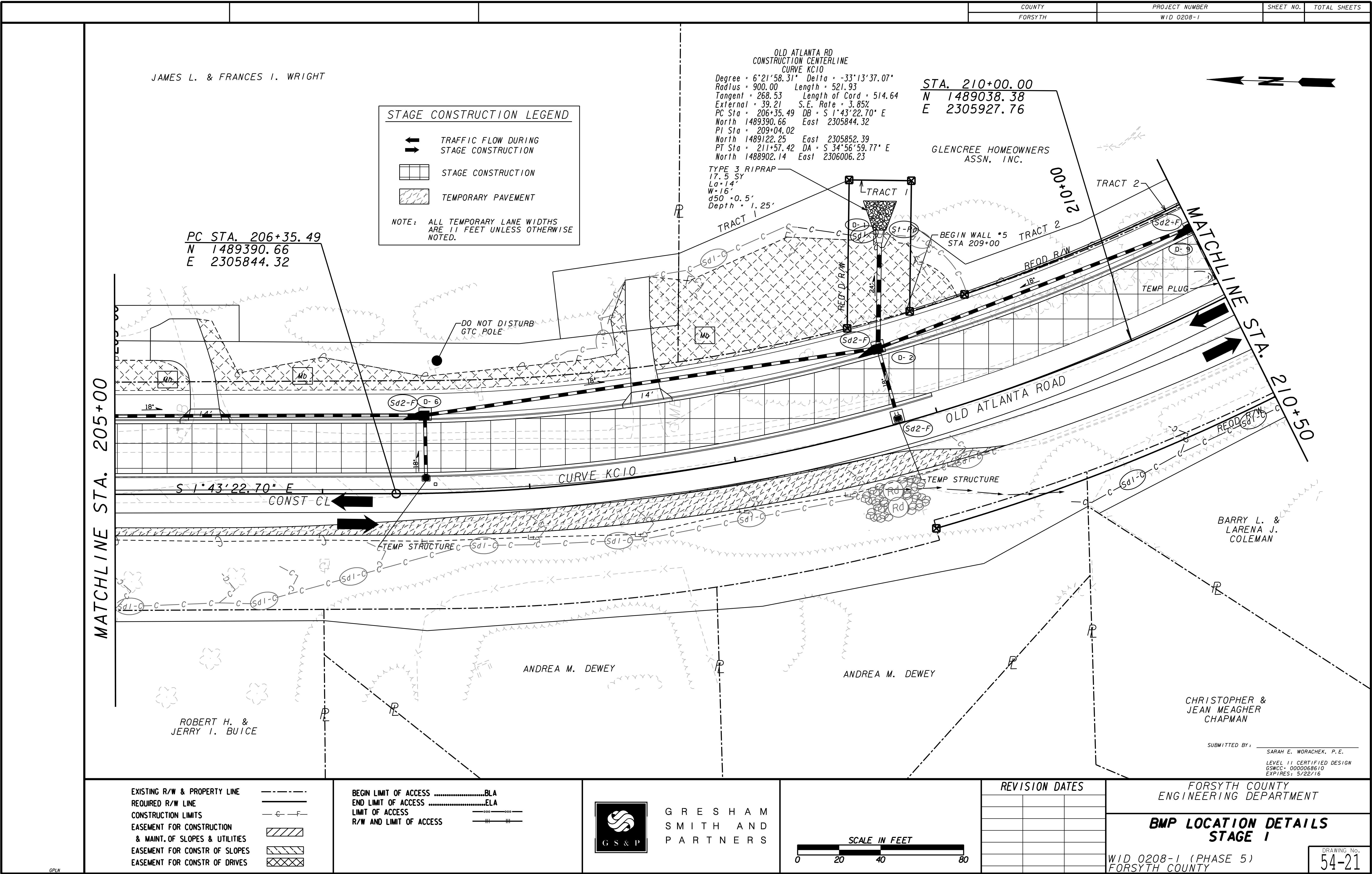
REVISION DATES		
4-17-20		

FORSYTH COUNTY
ENGINEERING DEPARTMENT

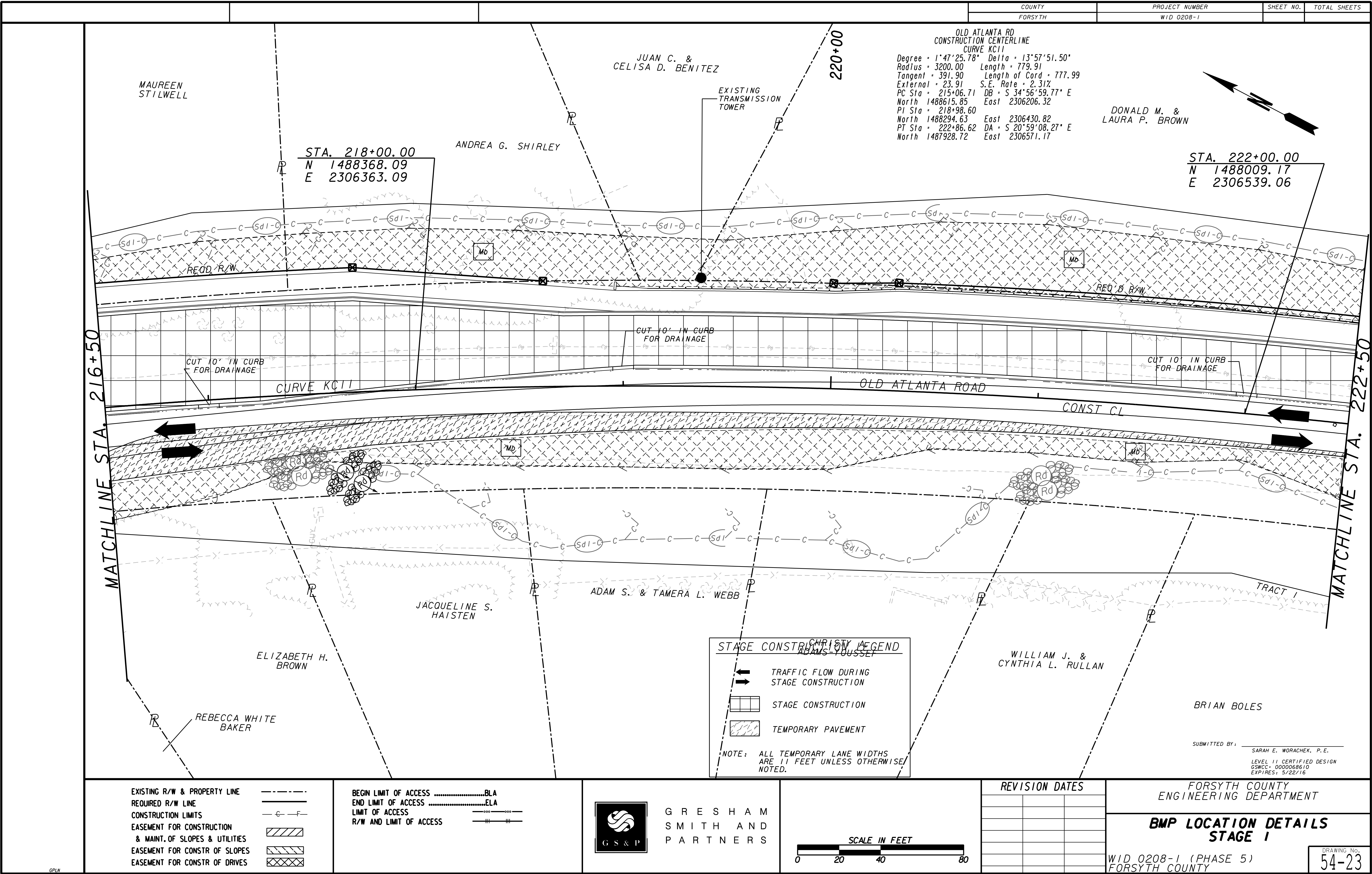
**BMP LOCATION DETAILS
STAGE I**

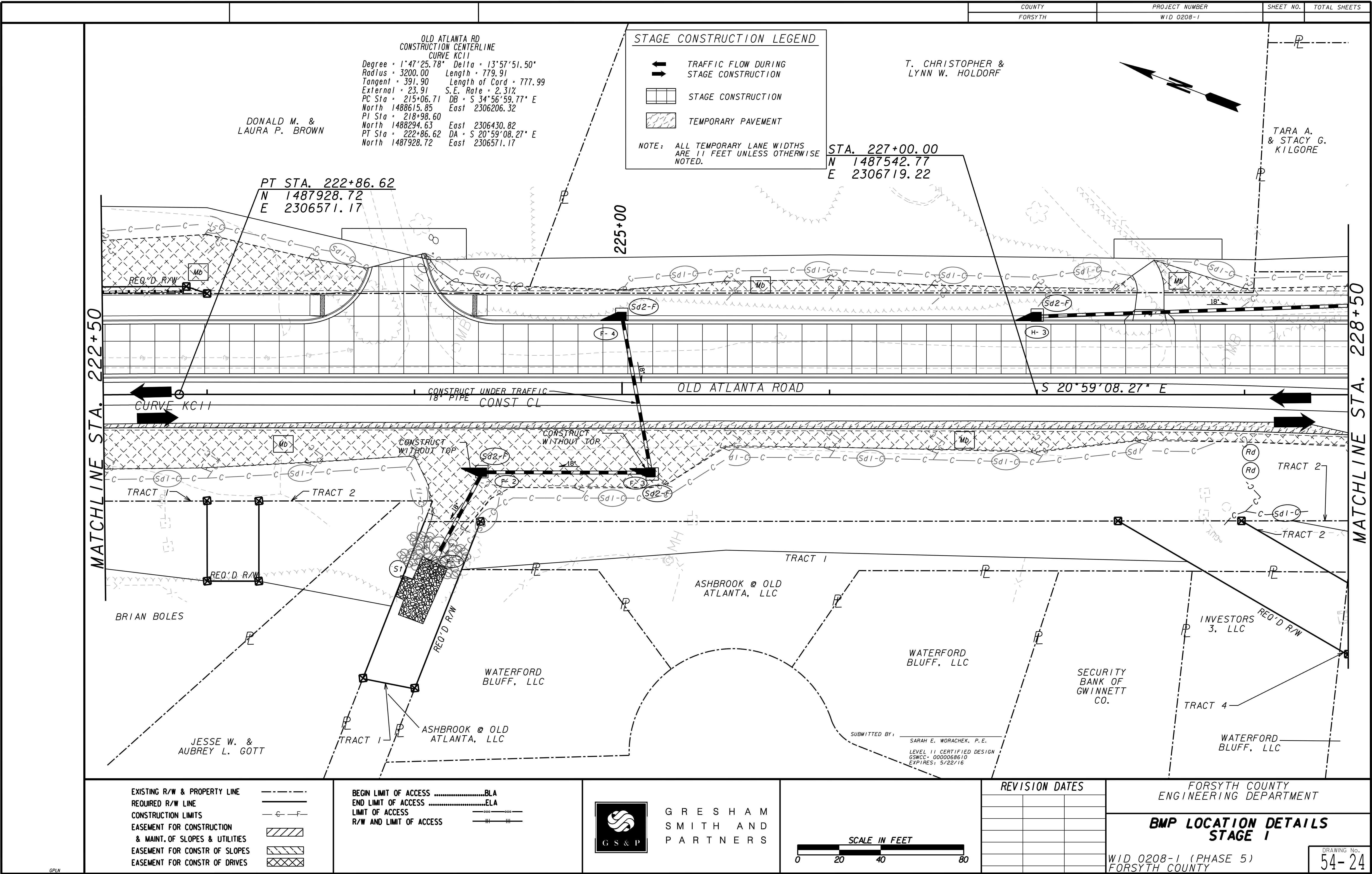
WID 0208-1 (PHASE 5)
FORSYTH COUNTY

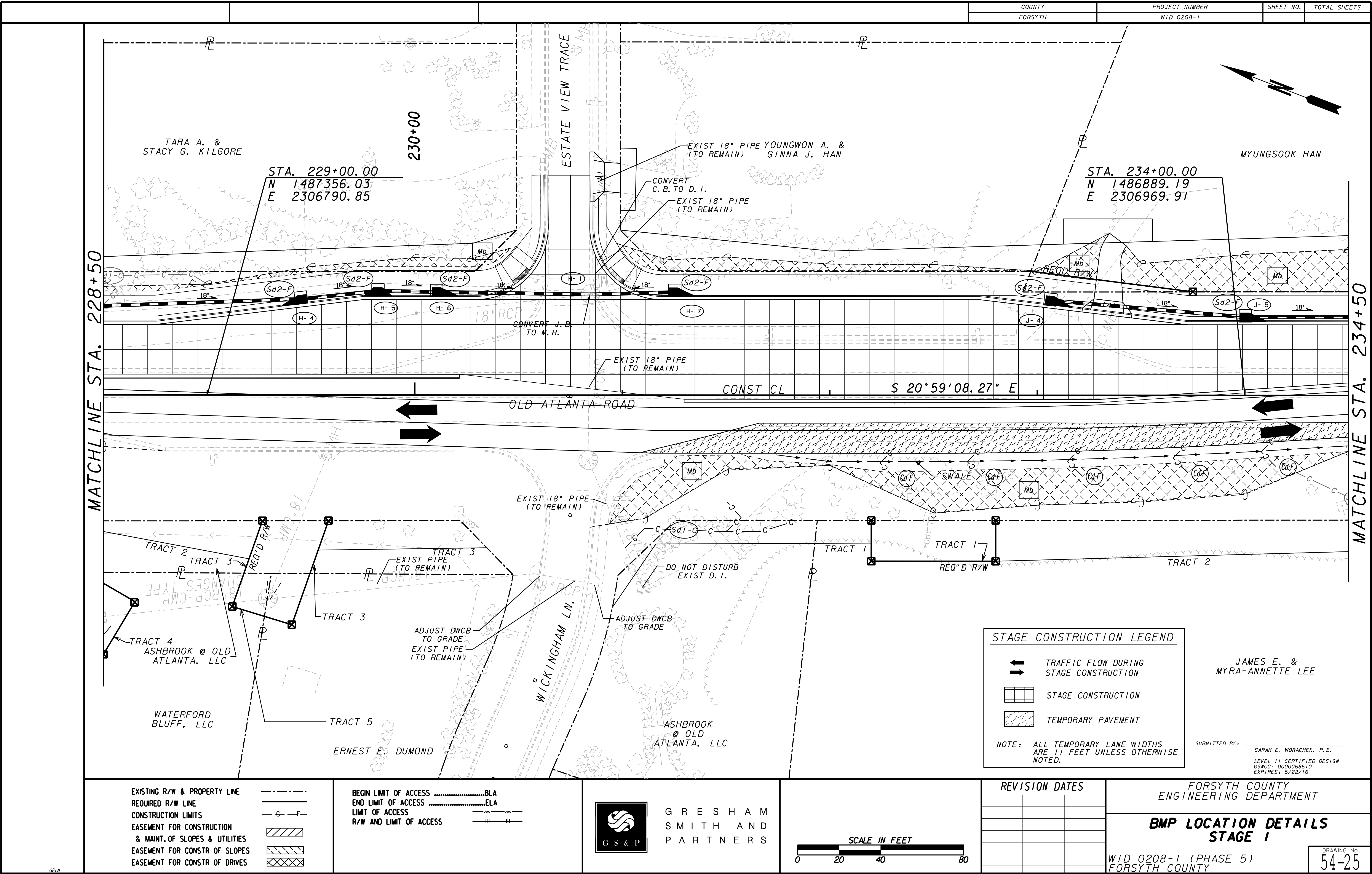
DRAWING No.
54-17

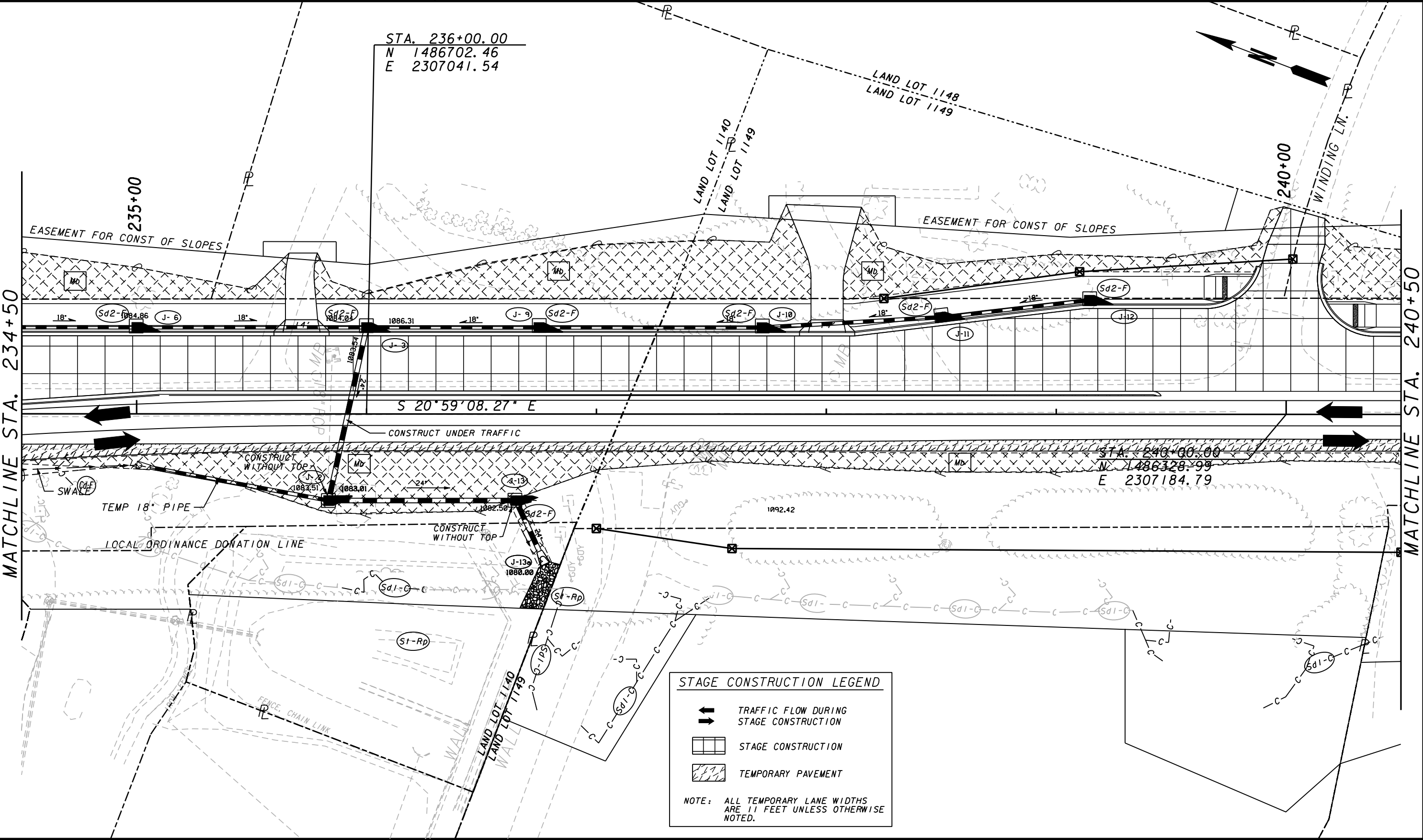












- EXISTING R/W & PROPERTY LINE
REQUIRED R/W LINE
CONSTRUCTION LIMITS
EASEMENT FOR CONSTRUCTION
& MAINT. OF SLOPES & UTILITIES
EASEMENT FOR CONST. OF SLOPES
EASEMENT FOR CONST. OF DRIVES

BEGIN LIMIT OF ACCESSBLA
END LIMIT OF ACCESSELA
LIMIT OF ACCESS
R/W AND LIMIT OF ACCESS



G R E S H A M
S M I T H A N D
P A R T N E R S



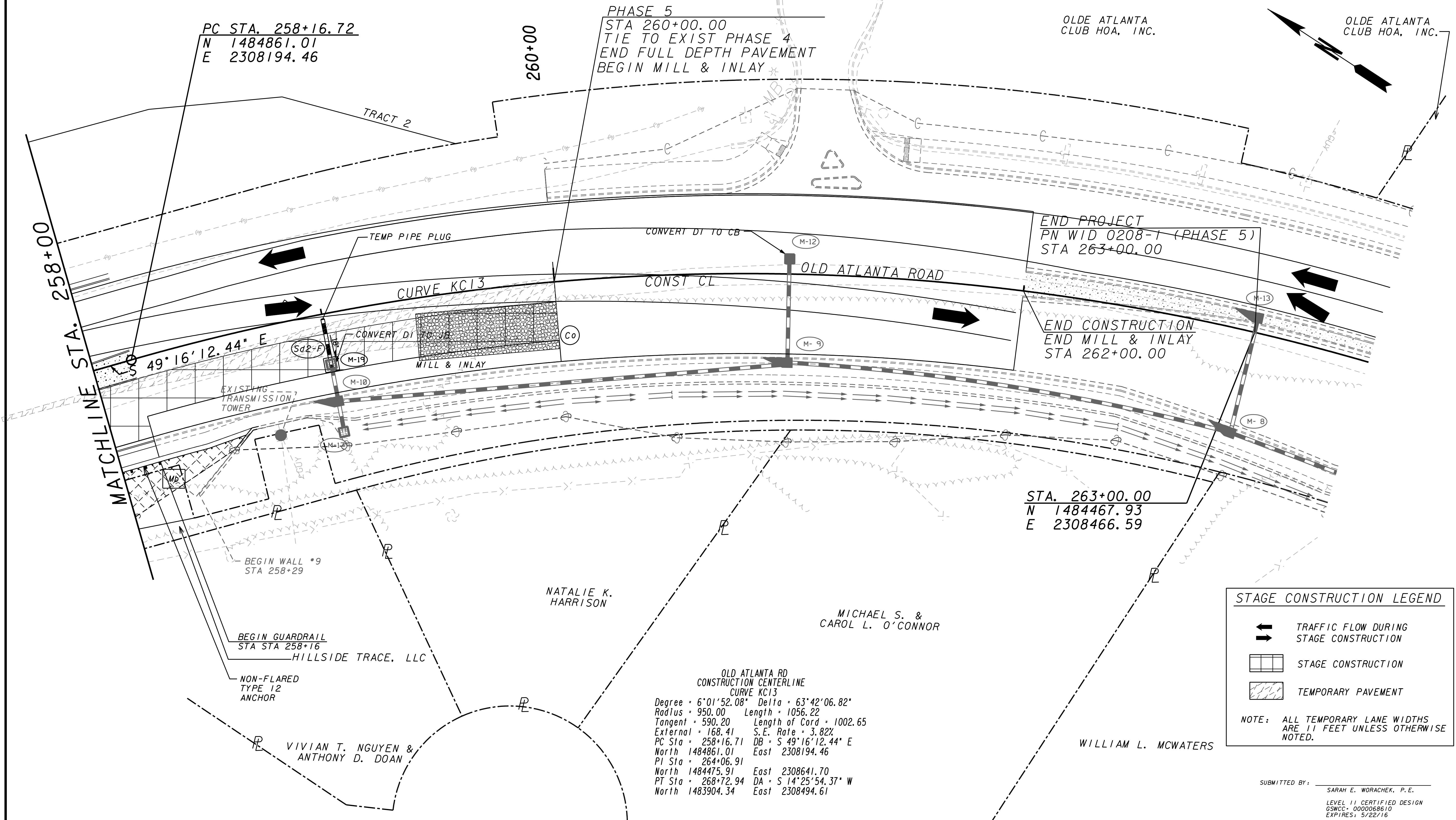
REVISION DATES	
4-17-20	

FORSYTH COUNTY
ENGINEERING DEPARTMENT

BMP LOCATION DETAILS
STAGE 1

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
54-26



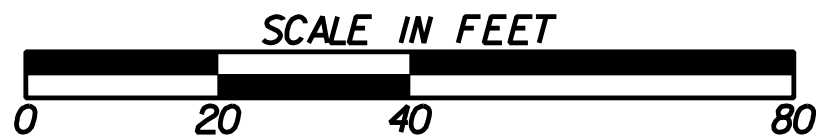
OLD ATLANTA RD
CONSTRUCTION CENTERLINE
CURVE KC13
Degree = 6°01'52.08" Delta = 63°42'06.82"
Radius = 950.00 Length = 1056.22
Tangent = 590.20 Length of Cord = 1002.65
External = 168.41 S.E. Rate = 3.82%
PC Sta = 258+16.71 DB = S 49°16'12.44" E
North 1484861.01 East 2308194.46
PI Sta = 264+06.91
North 1484475.91 East 2308641.70
PT Sta = 268+72.94 DA = S 14°25'54.37" W
North 1483904.34 East 2308494.61

EXISTING R/W & PROPERTY LINE
REQUIRED R/W LINE
CONSTRUCTION LIMITS
EASEMENT FOR CONSTRUCTION
& MAINT. OF SLOPES & UTILITIES
EASEMENT FOR CONSTR OF SLOPES
EASEMENT FOR CONSTR OF DRIVES

BEGIN LIMIT OF ACCESSBLA
END LIMIT OF ACCESSELA
LIMIT OF ACCESS
R/W AND LIMIT OF ACCESS



GRESHAM
SMITH AND
PARTNERS



REVISION DATES

FORSYTH COUNTY
ENGINEERING DEPARTMENT

**BMP LOCATION DETAILS
STAGE I**

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
54-30

SUBMITTED BY: SARAH E. WORACHEK, P.E.
LEVEL 11 CERTIFIED DESIGN
GSWCC-0000068610
EXPIRES: 5/22/16

STAGE CONSTRUCTION LEGEND

←

TRAFFIC FLOW DURING STAGE CONSTRUCTION

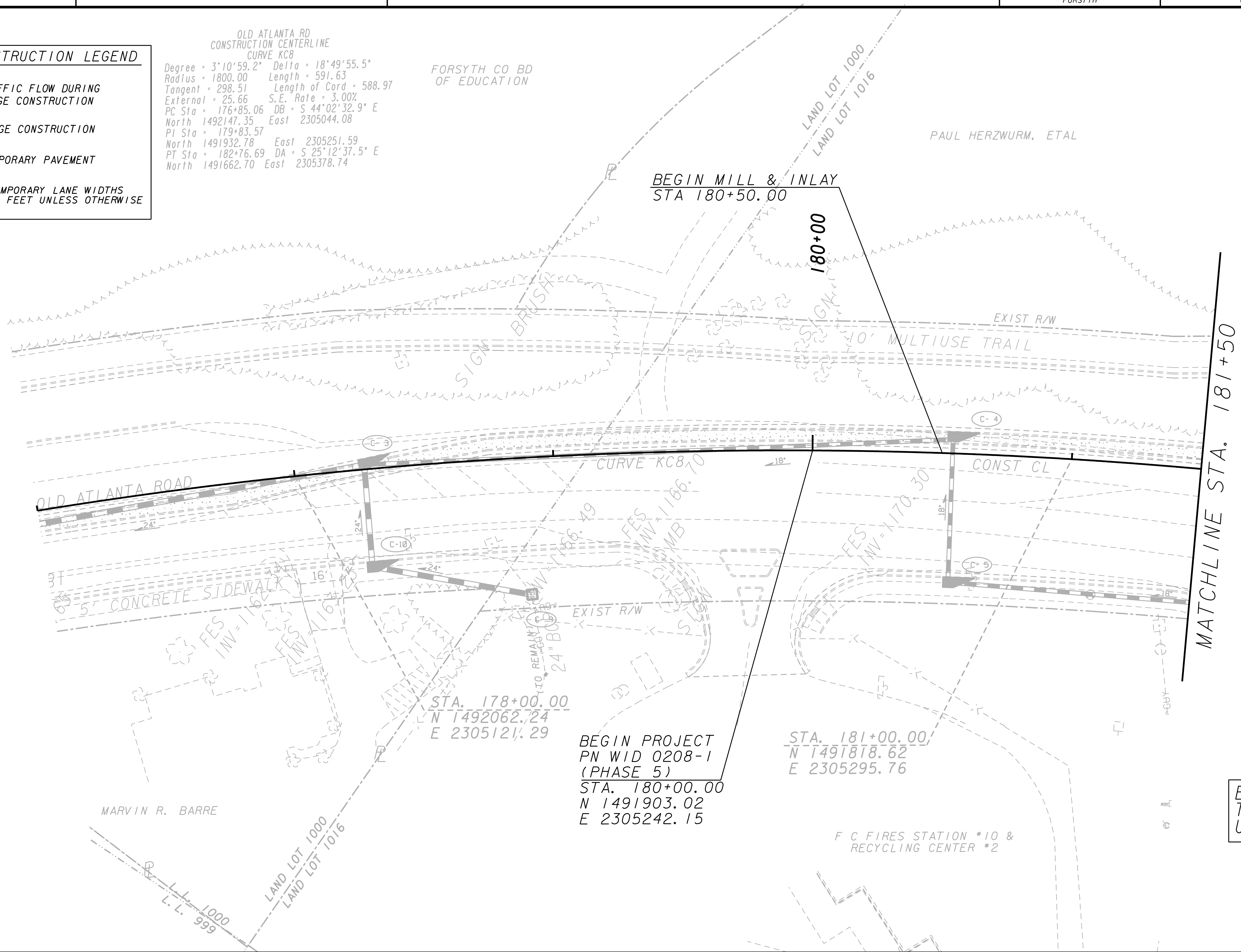
STAGE CONSTRUCTION

TEMPORARY PAVEMENT

NOTE: ALL TEMPORARY LANE WIDTHS ARE 11 FEET UNLESS OTHERWISE NOTED.

OLD ATLANTA RD
CONSTRUCTION CENTERLINE
CURVE KC8
Degree = 3°10'59.2" Delta = 18°49'55.5"
Radius = 1800.00 Length = 591.63
Tangent = 298.51 Length of Cord = 588.97
External = 25.66 S.E. Rate = 3.00%
PC Sta = 176+85.06 DB = S 44°02'32.9" E
North 1492147.35 East 2305044.08
PI Sta = 179+83.57
North 1491932.78 East 2305251.59
PT Sta = 182+76.69 DA = S 25°12'37.5" E
North 1491662.70 East 2305378.74

FORSYTH CO BD
OF EDUCATION



EXIST DRNG STA. 180+00
TO STA 184+52 TO REMAIN
UNLESS OTHERWISE NOTED.

SUBMITTED BY: SARAH E. WORACHEK, P.E.
LEVEL 11 CERTIFIED DESIGN
GSWCC - 000006610
EXPIRES: 5/22/16

EXISTING R/W & PROPERTY LINE

REQUIRED R/W LINE

CONSTRUCTION LIMITS

EASEMENT FOR CONSTRUCTION & MAINT. OF SLOPES & UTILITIES

EASEMENT FOR CONSTR OF SLOPES

EASEMENT FOR CONSTR OF DRIVES

BEGIN LIMIT OF ACCESSBLA

END LIMIT OF ACCESSELA

LIMIT OF ACCESS

R/W AND LIMIT OF ACCESS

GS & P

GRESHAM SMITH AND PARTNERS

SCALE IN FEET

0

20

40

80

REVISION DATES

FORSYTH COUNTY
ENGINEERING DEPARTMENT

BMP LOCATION DETAILS
STAGE 2

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.

54-31

GPLN

OLD ATLANTA ROAD
STA. 183+62.19
FIRE STATION ACCESS ROAD
20+00.00
OLD ATLANTA ROAD
STA. 183+56.23 =
JAMES BURGESS ROAD
STA. 10+00.00

PAUL HERZWURM, ETAL

EXIST DRNG STA. 180+00
TO STA 184+52 TO REMAIN
UNLESS OTHERWISE NOTED.

STAGE CONSTRUCTION LEGEND

←

TRAFFIC FLOW DURING
STAGE CONSTRUCTION

▢

STAGE CONSTRUCTION

▨

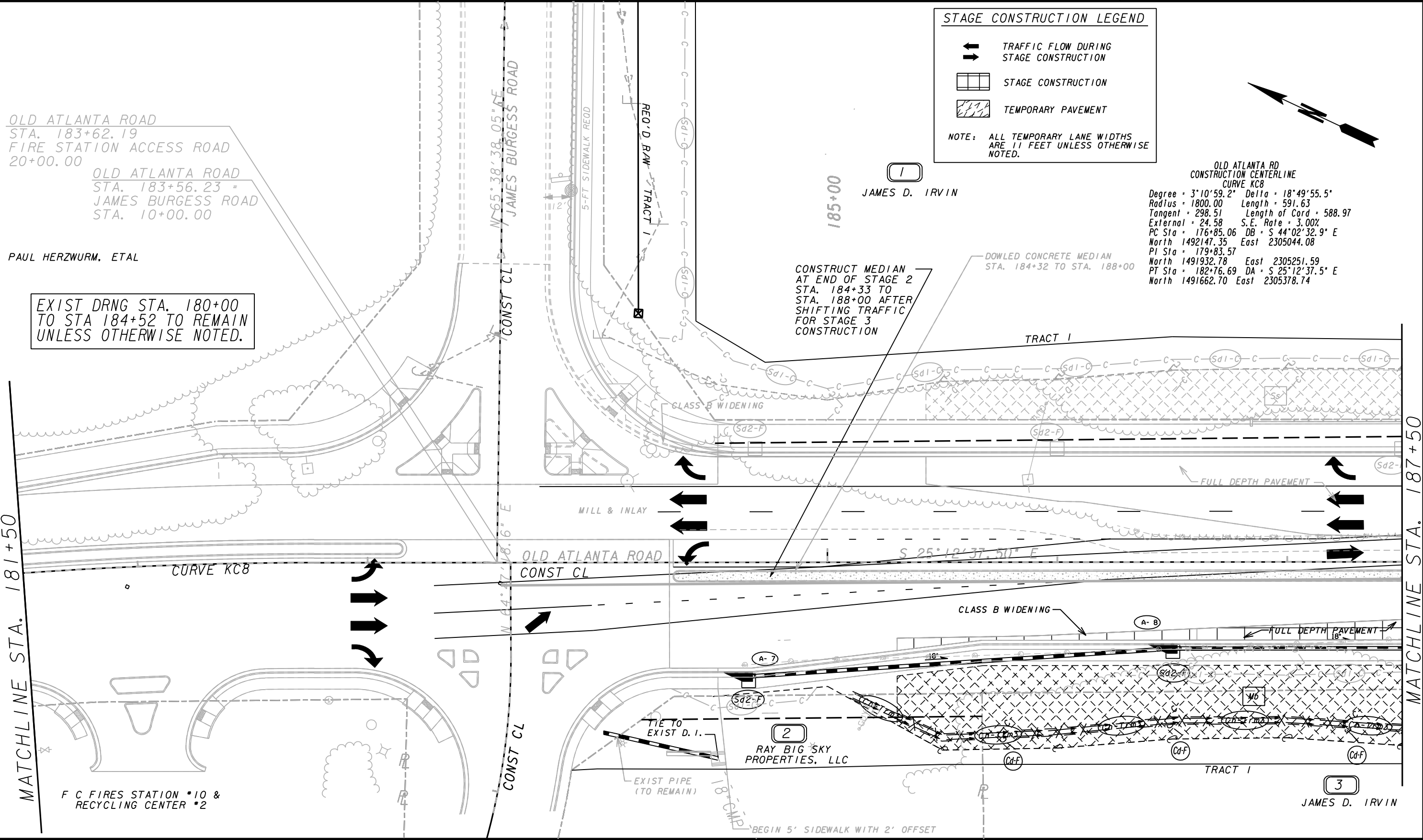
TEMPORARY PAVEMENT

NOTE: ALL TEMPORARY LANE WIDTHS
ARE 11 FEET UNLESS OTHERWISE
NOTED.

OLD ATLANTA RD
CONSTRUCTION CENTERLINE
CURVE KC8
Degree = 3°10'59.2" Delta = 18°49'55.5"
Radius = 1800.00 Length = 591.63
Tangent = 298.51 Length of Cord = 588.97
External = 24.58 S.E. Rate = 3.00%
PC Sta = 176+85.06 DB = S 44°02'32.9" E
North 1492147.35 East 2305044.08
PI Sta = 179+83.57
North 1491932.78 East 2305251.59
PT Sta = 182+76.69 DA = S 25°12'37.5" E
North 1491662.70 East 2305378.74

MATCHLINE STA. 181+50

MATCHLINE STA. 187+50

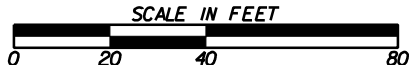


- EXISTING R/W & PROPERTY LINE
REQUIRED R/W LINE
CONSTRUCTION LIMITS
EASEMENT FOR CONSTRUCTION
& MAINT. OF SLOPES & UTILITIES
EASEMENT FOR CONSTR OF SLOPES
EASEMENT FOR CONSTR OF DRIVES
- ---

- BEGIN LIMIT OF ACCESSBLA
END LIMIT OF ACCESSELA
LIMIT OF ACCESS
R/W AND LIMIT OF ACCESS
- ---



G R E S H A M
S M I T H A N D
P A R T N E R S



REVISION DATES	
4-17-20	

FORSYTH COUNTY
ENGINEERING DEPARTMENT

BMP LOCATION DETAILS
STAGE 2

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
54-32

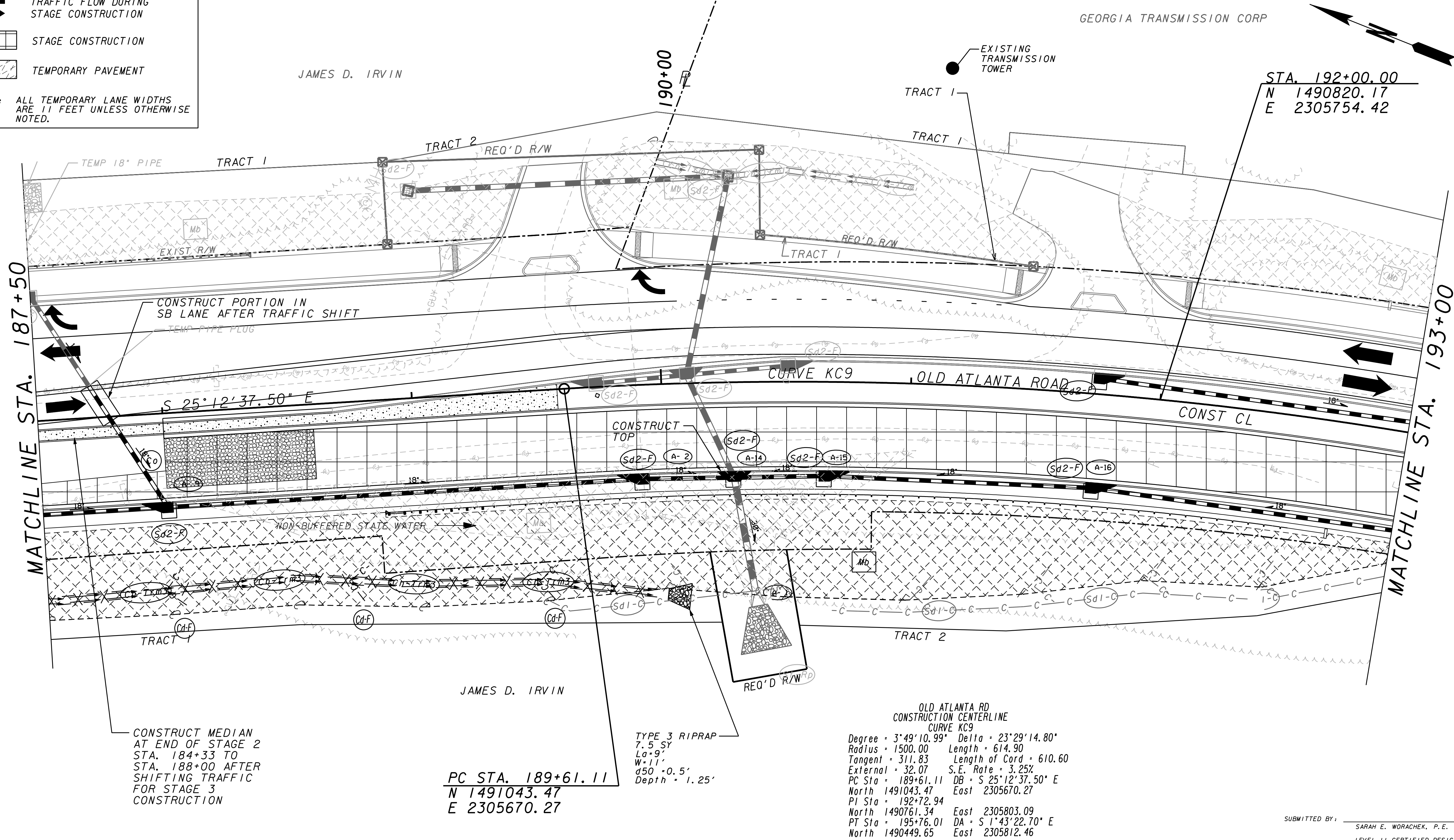
STAGE CONSTRUCTION LEGEND

← TRAFFIC FLOW DURING STAGE CONSTRUCTION

▢ STAGE CONSTRUCTION

▨ TEMPORARY PAVEMENT

NOTE: ALL TEMPORARY LANE WIDTHS ARE 11 FEET UNLESS OTHERWISE NOTED.

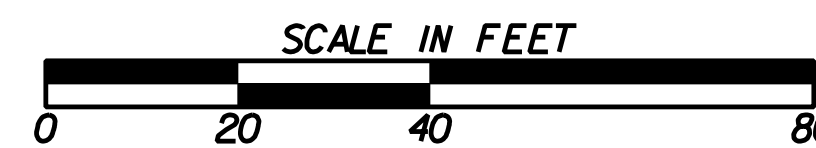


- EXISTING R/W & PROPERTY LINE
- REQUIRED R/W LINE
- CONSTRUCTION LIMITS
- EASEMENT FOR CONSTRUCTION & MAINT. OF SLOPES & UTILITIES
- EASEMENT FOR CONSTR OF SLOPES
- EASEMENT FOR CONSTR OF DRIVES

- BEGIN LIMIT OF ACCESS
- END LIMIT OF ACCESS
- LIMIT OF ACCESS
- R/W AND LIMIT OF ACCESS



GRESHAM
SMITH AND
PARTNERS



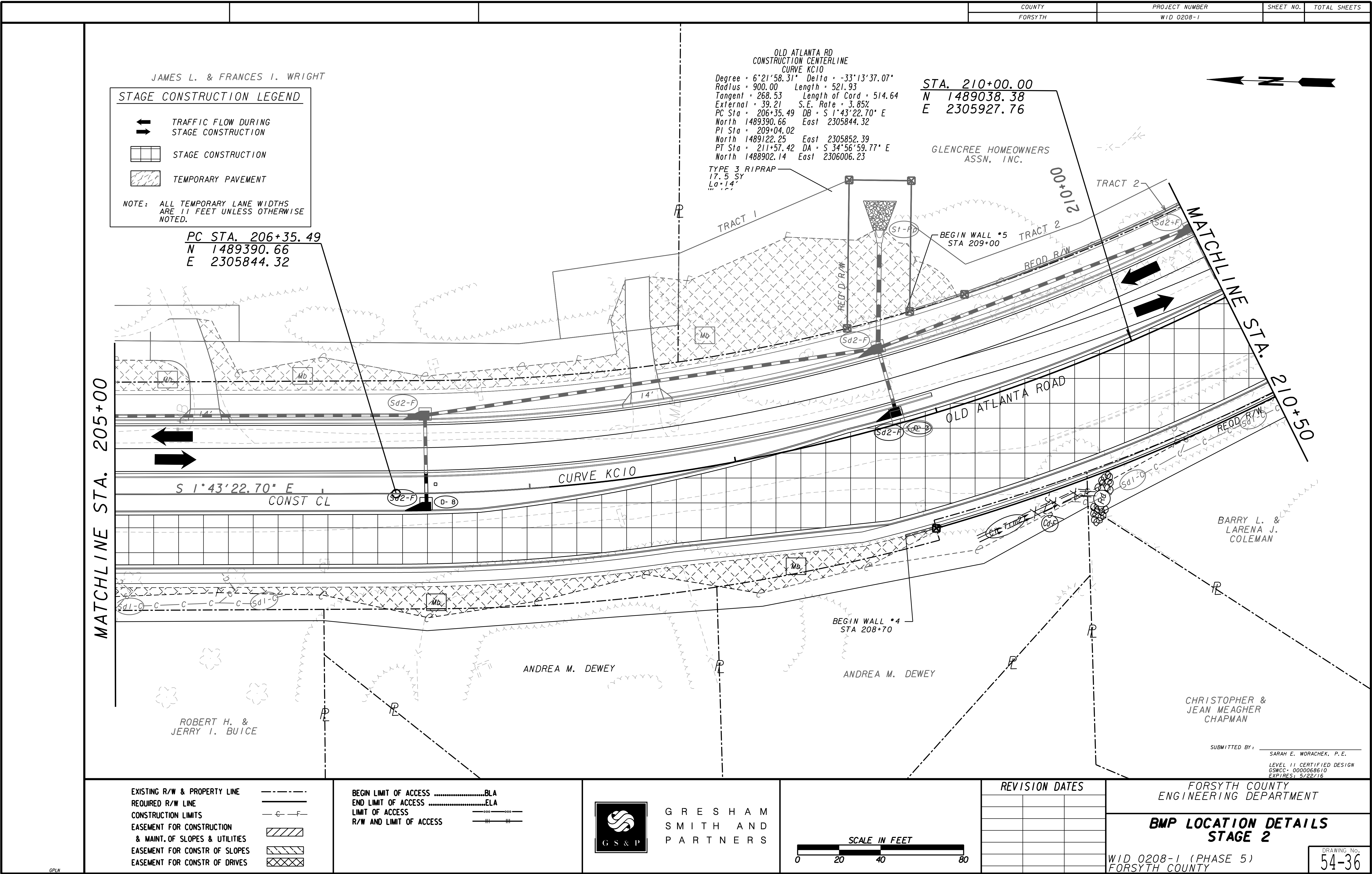
REVISION DATES

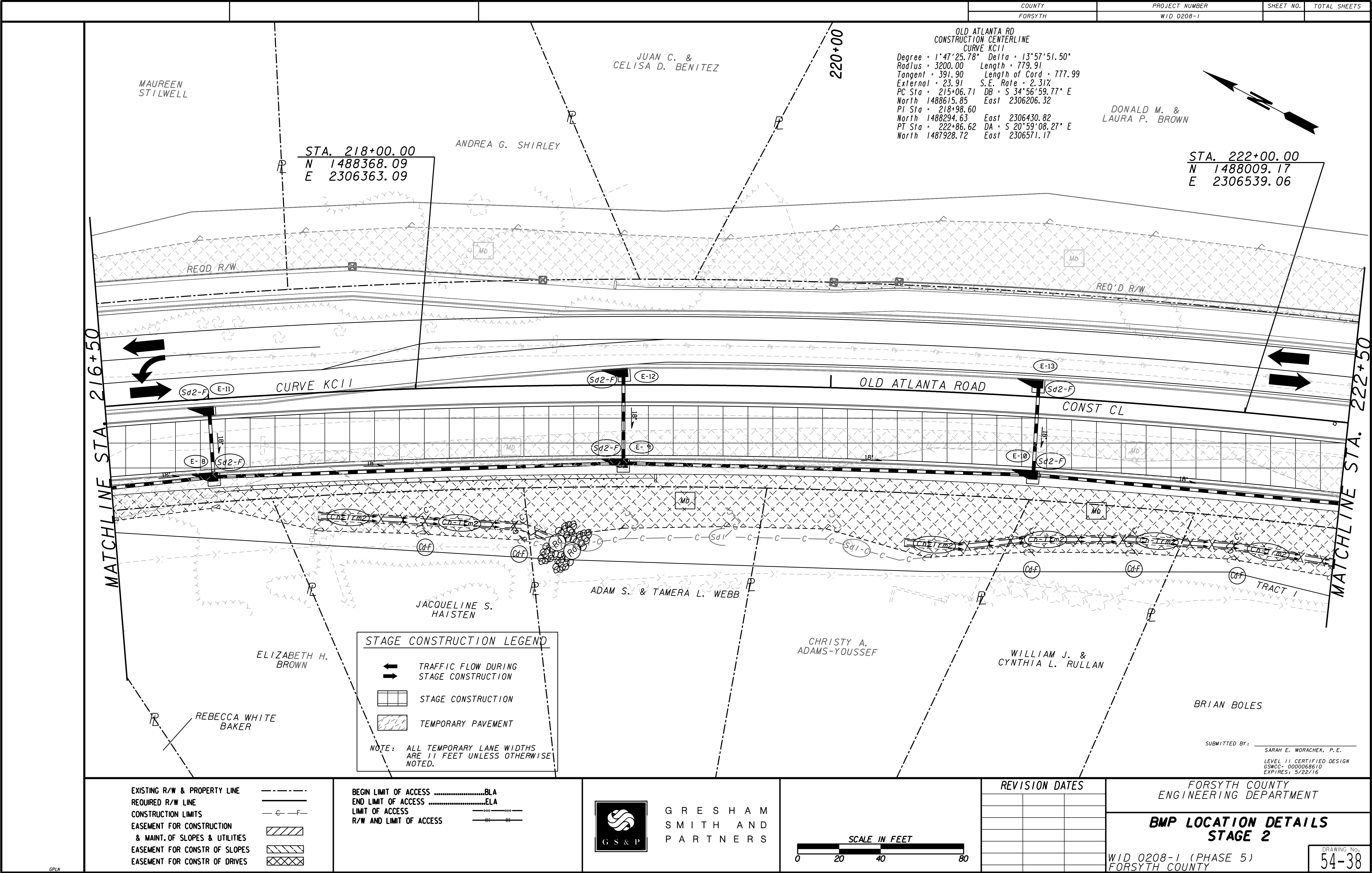
FORSYTH COUNTY
ENGINEERING DEPARTMENT

BMP LOCATION DETAILS
STAGE 2

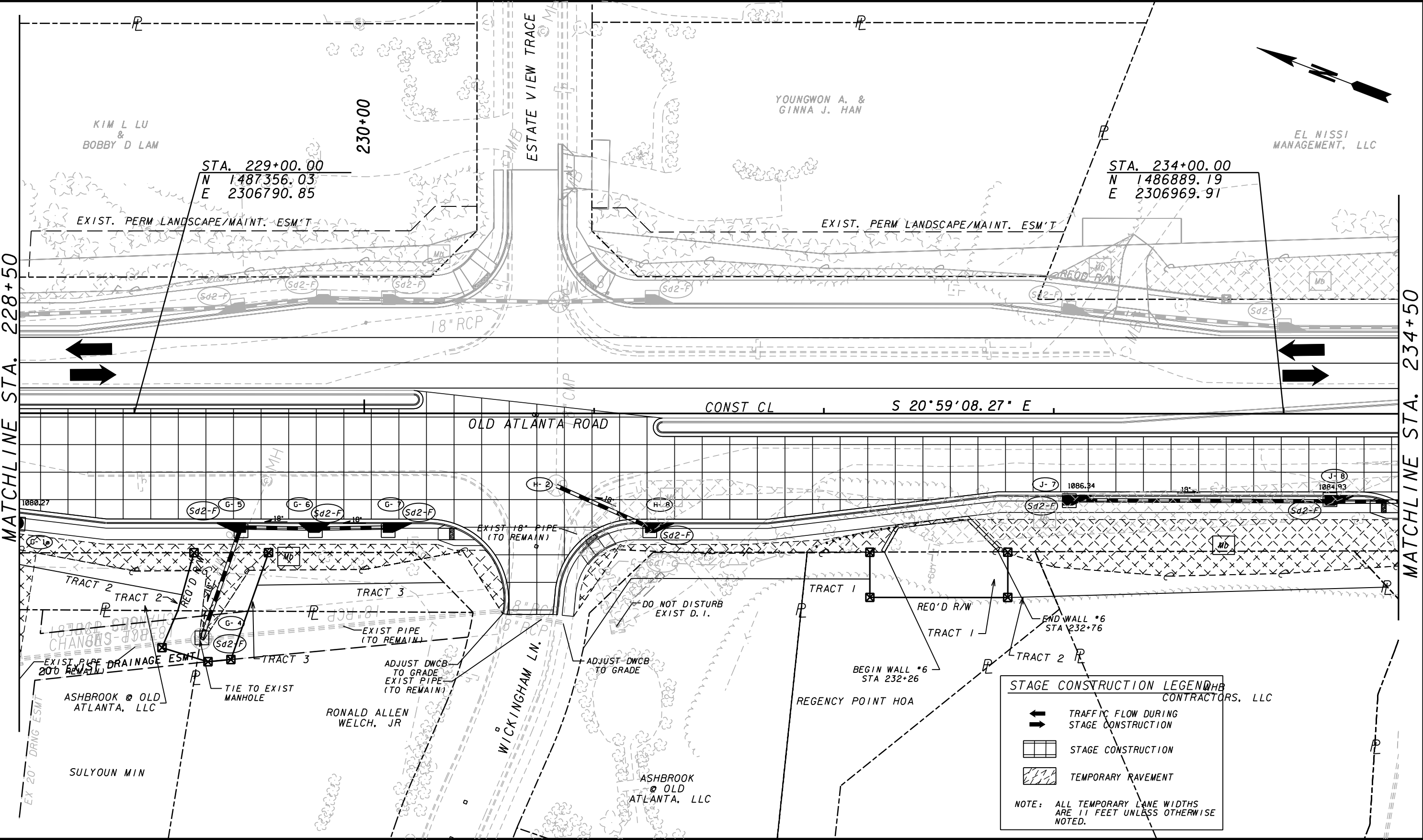
WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
54-33





DRAWING No.
4-39



EXISTING R/W & PROPERTY LINE
REQUIRED R/W LINE
CONSTRUCTION LIMITS
EASEMENT FOR CONSTRUCTION
& MAINT. OF SLOPES & UTILITIES
EASEMENT FOR CONSTR OF SLOPES
EASEMENT FOR CONSTR OF DRIVES

BEGIN LIMIT OF ACCESSBLA
END LIMIT OF ACCESSELA
LIMIT OF ACCESS
R/W AND LIMIT OF ACCESS

GRESHAM
SMITH AND
PARTNERS

SCALE IN FEET

0

20

40

80

REVISION DATES

4-17-20		

FORSYTH COUNTY
ENGINEERING DEPARTMENT

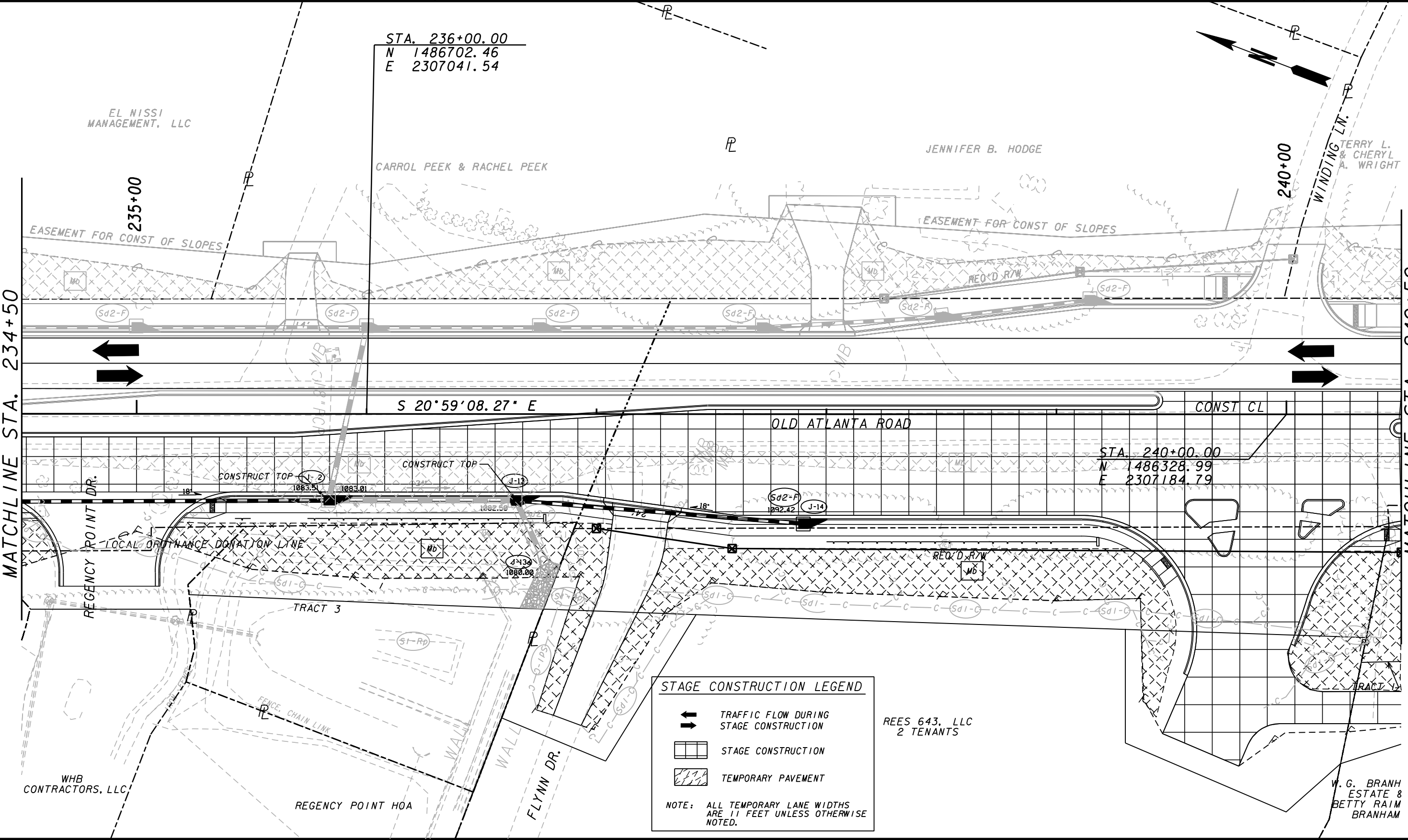
BMP LOCATION DETAILS
STAGE 2

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.

54-40

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EXISTING R/W & PROPERTY LINE
REQUIRED R/W LINE
CONSTRUCTION LIMITS
EASEMENT FOR CONSTRUCTION
& MAINT. OF SLOPES & UTILITIES
EASEMENT FOR CONSTR OF SLOPES
EASEMENT FOR CONSTR OF DRIVES

BEGIN LIMIT OF ACCESSBLA
END LIMIT OF ACCESSELA
LIMIT OF ACCESS
R/W AND LIMIT OF ACCESS

G R E S H A M
S M I T H A N D
P A R T N E R S

SCALE IN FEET
0 20 40 80

REVISION DATES

4-17-20		

FORSYTH COUNTY
ENGINEERING DEPARTMENT

BMP LOCATION DETAILS
STAGE 2

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
54-41

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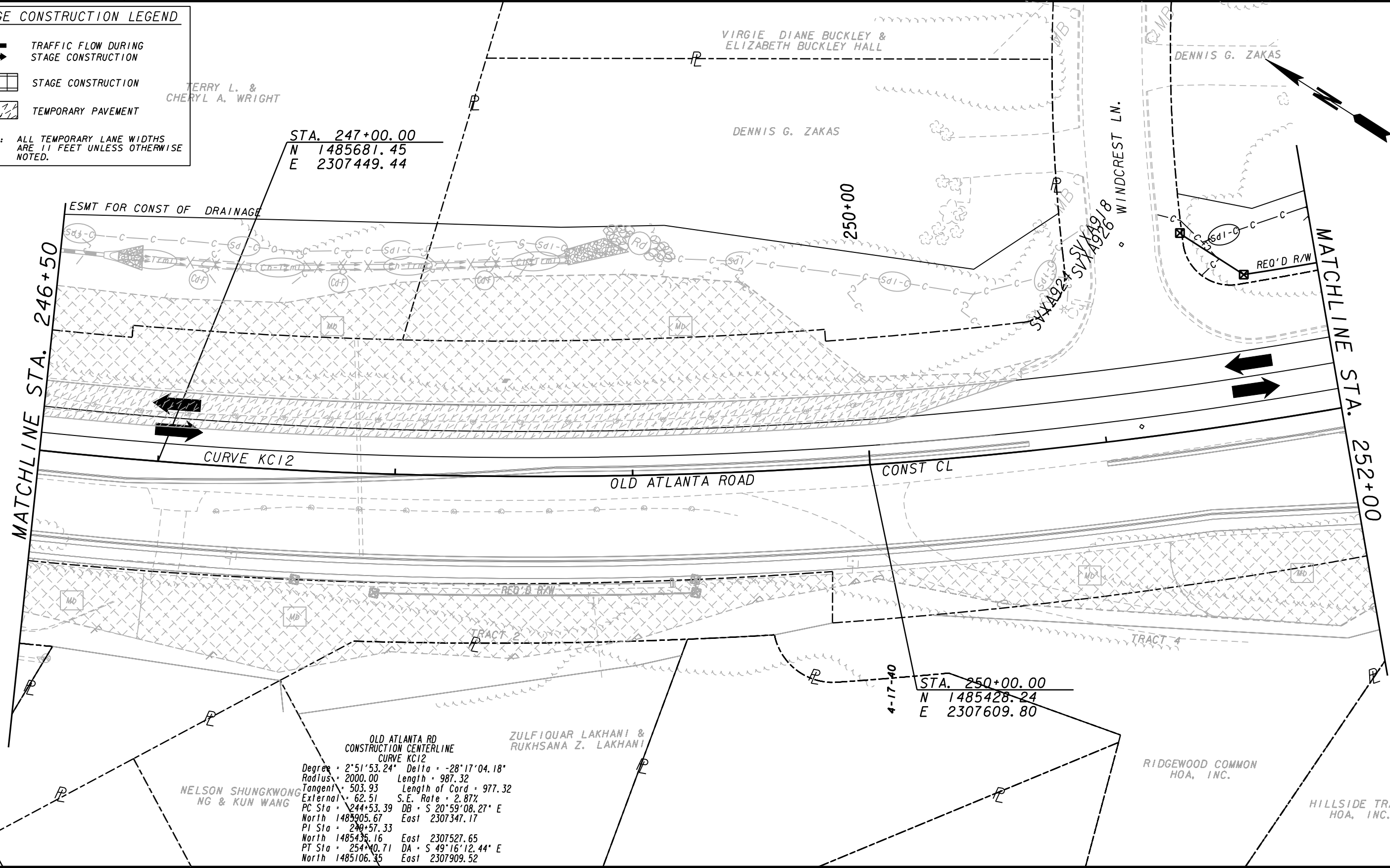
STAGE CONSTRUCTION LEGEND

TRAFFIC FLOW DURING
STAGE CONSTRUCTION

STAGE CONSTRUCTION

TEMPORARY PAVEMENT

NOTE: ALL TEMPORARY LANE WIDTHS
ARE 11 FEET UNLESS OTHERWISE
NOTED.



OLD ATLANTA RD
CONSTRUCTION CENTERLINE
CURVE KC12

DEGREE	2°51'53.24"	DELTA	-28°17'04.18"
RADIUS	2000.00	LENGTH	987.32
TANGENT	503.93	LENGTH OF CORD	977.32
EXTERNAL	62.51	S.E. RATE	2.87%
PC STA	244+53.39	DB	S 20°59'08.27" E
NORTH	1485905.67	EAST	2307347.17
PI STA	249+57.33		
NORTH	1485435.16	EAST	2307527.65
PT STA	254+40.71	DA	S 49°16'12.44" E
NORTH	1485106.35	EAST	2307909.52

EXISTING R/W & PROPERTY LINE
REQUIRED R/W LINE
CONSTRUCTION LIMITS
EASEMENT FOR CONSTRUCTION
& MAINT. OF SLOPES & UTILITIES
EASEMENT FOR CONSTR OF SLOPES
EASEMENT FOR CONSTR OF DRIVES

-----BLA

END LIMIT OF ACCESS -----ELA

-----BLA

LIMIT OF ACCESS -----ELA

=====

R/W AND LIMIT OF ACCESS

G R E S H A M
S M I T H A N D
P A R T N E R S

SCALE IN FEET
0 20 40 80

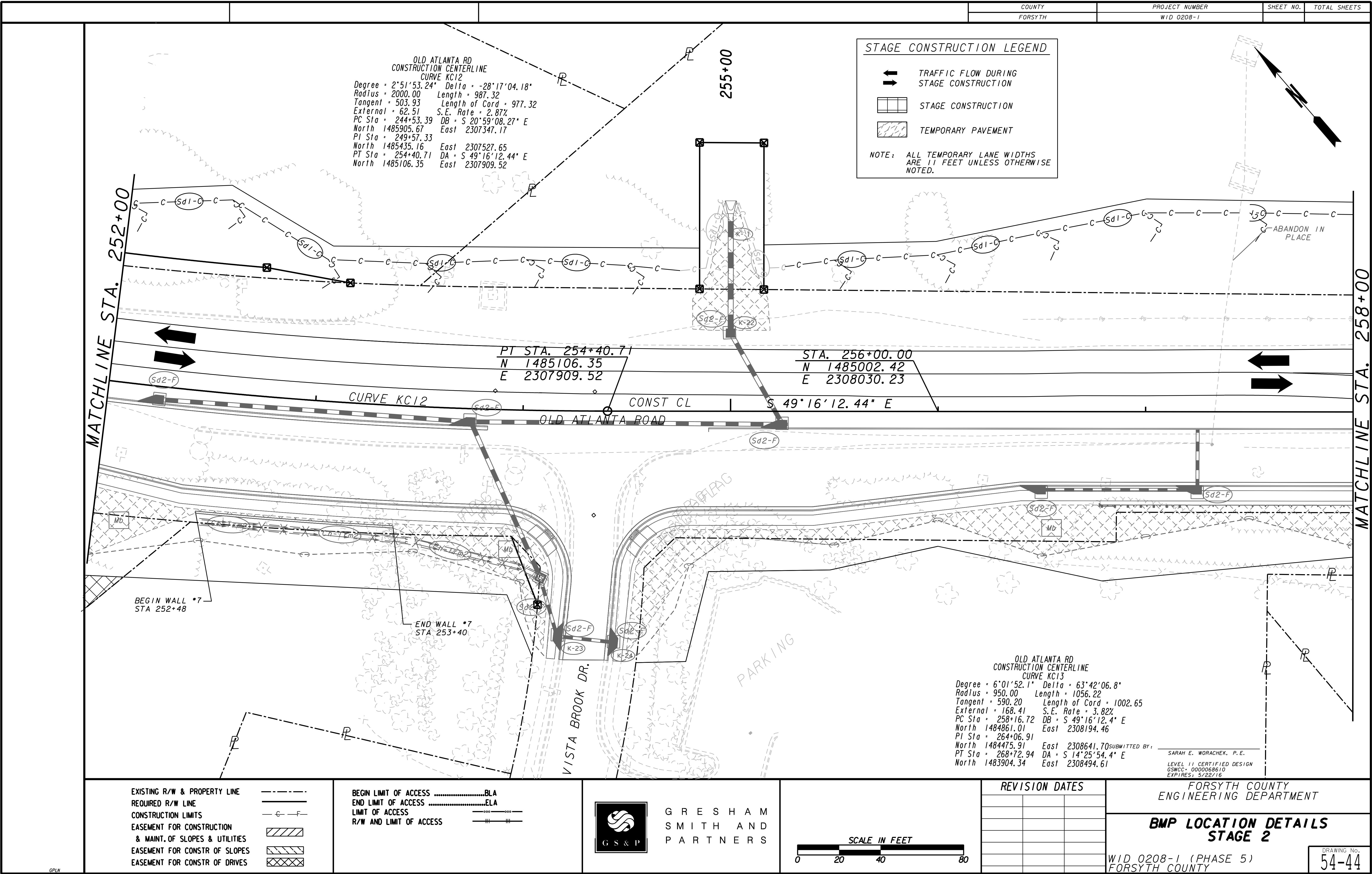
REVISION DATES
4-17-40

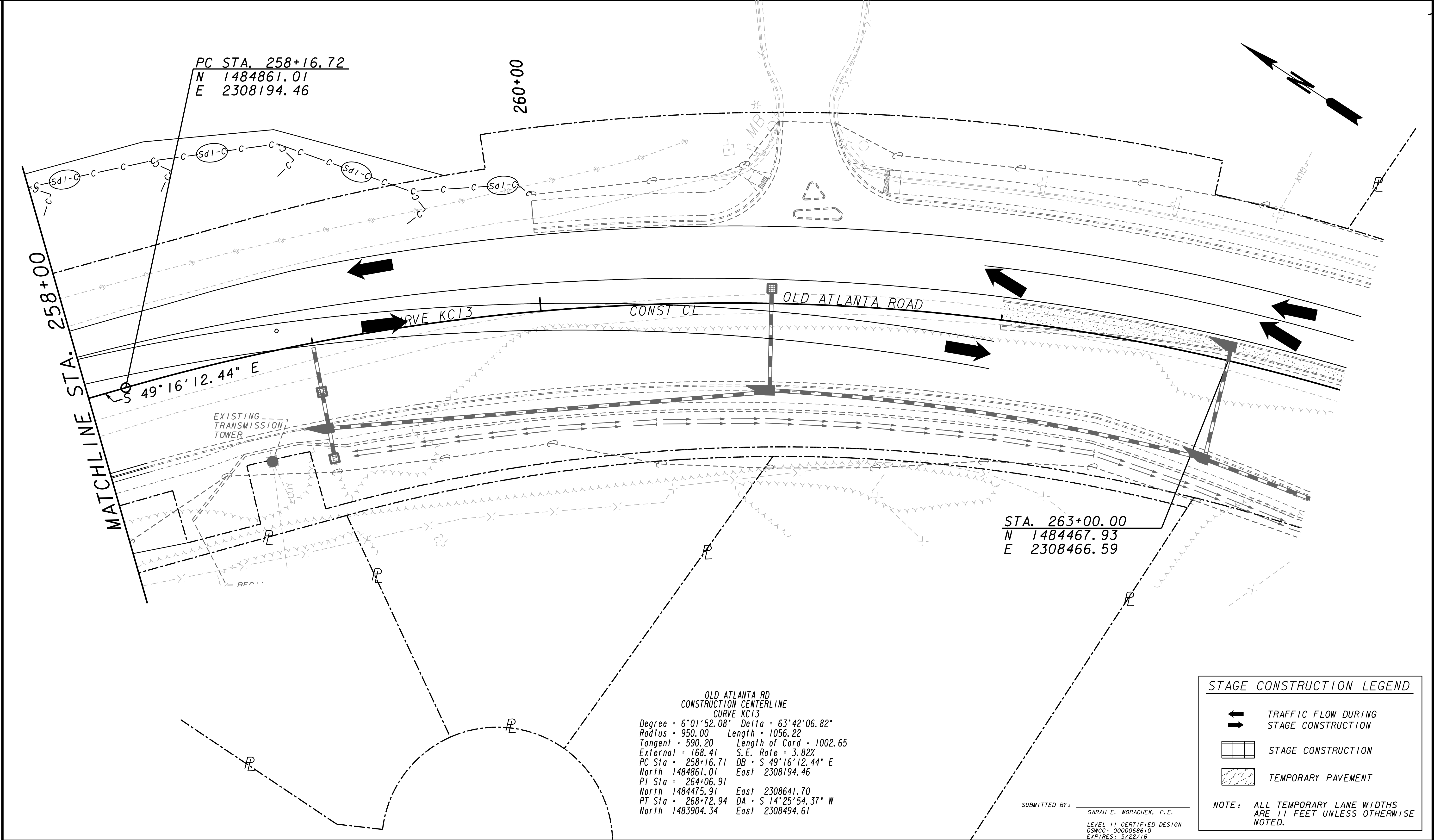
FORSYTH COUNTY
ENGINEERING DEPARTMENT

BMP LOCATION DETAILS
STAGE 2

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.
54-43





EXISTING R/W & PROPERTY LINE
REQUIRED R/W LINE
CONSTRUCTION LIMITS
EASEMENT FOR CONSTRUCTION
& MAINT. OF SLOPES & UTILITIES
EASEMENT FOR CONSTR OF SLOPES
EASEMENT FOR CONSTR OF DRIVES

BEGIN LIMIT OF ACCESSBLA
END LIMIT OF ACCESSELA
LIMIT OF ACCESS
R/W AND LIMIT OF ACCESS

GRESHAM
SMITH AND
PARTNERS

SCALE IN FEET

0

20

40

80

REVISION DATES

FORSYTH COUNTY
ENGINEERING DEPARTMENT

BMP LOCATION DETAILS
STAGE 2

WID 0208-1 (PHASE 5)
FORSYTH COUNTY

DRAWING No.

54-45

STAGE CONSTRUCTION LEGEND

←

 TRAFFIC FLOW DURING
STAGE CONSTRUCTION

▢

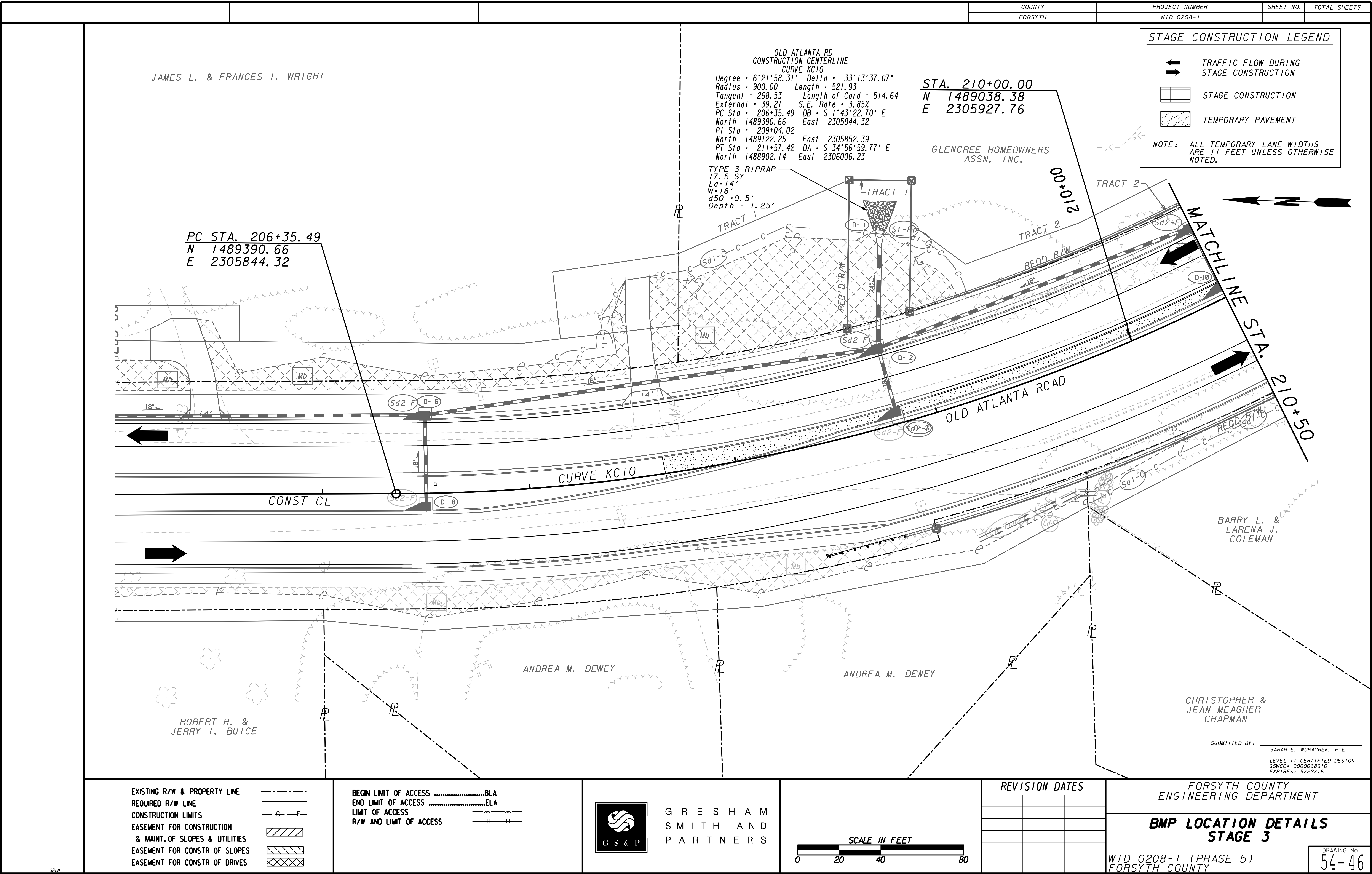
 STAGE CONSTRUCTION

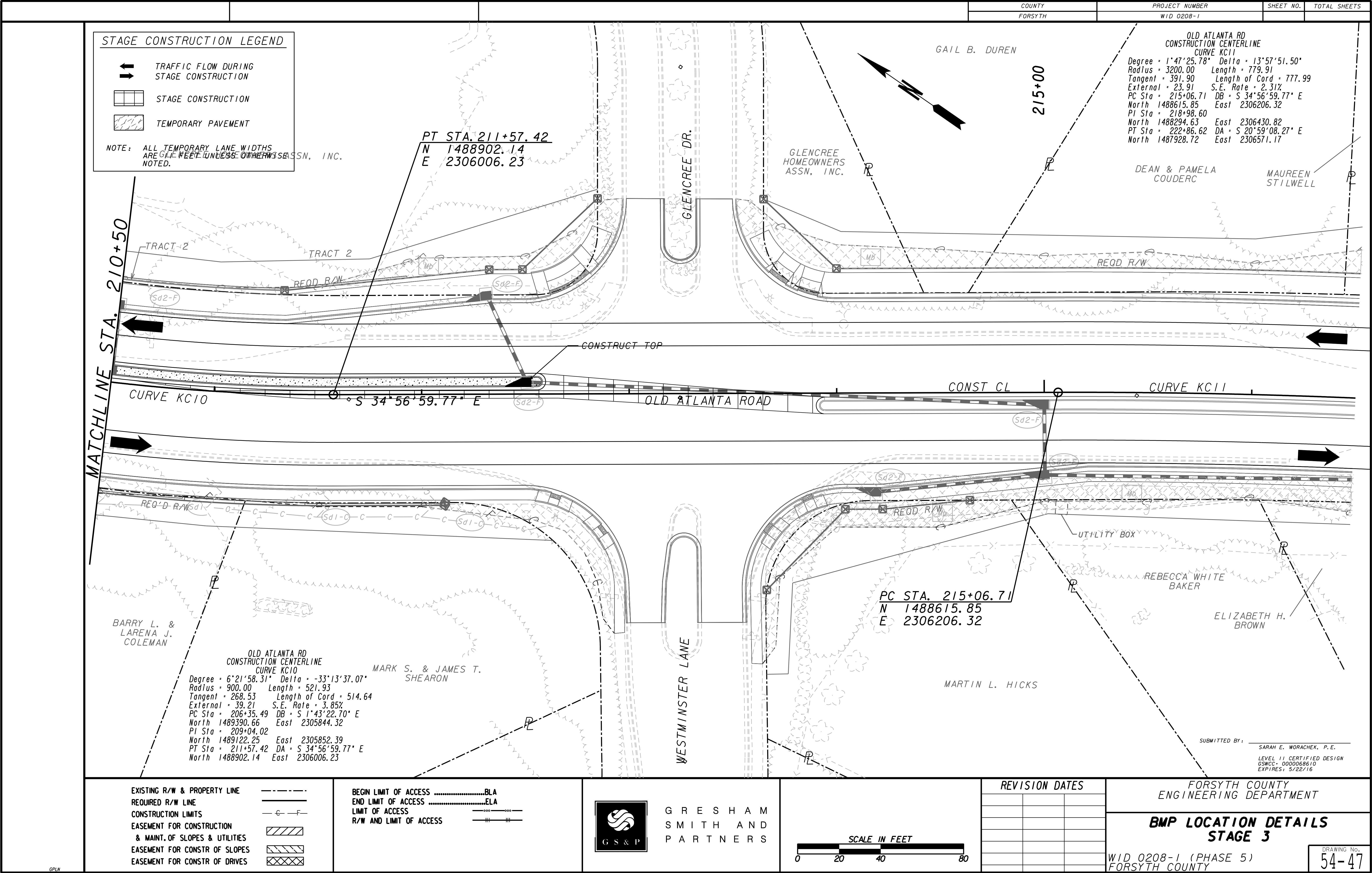
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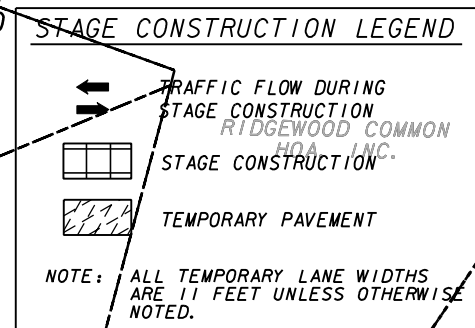
 TEMPORARY PAVEMENT

NOTE: ALL TEMPORARY LANE WIDTHS
ARE 11 FEET UNLESS OTHERWISE
NOTED.

GPLN





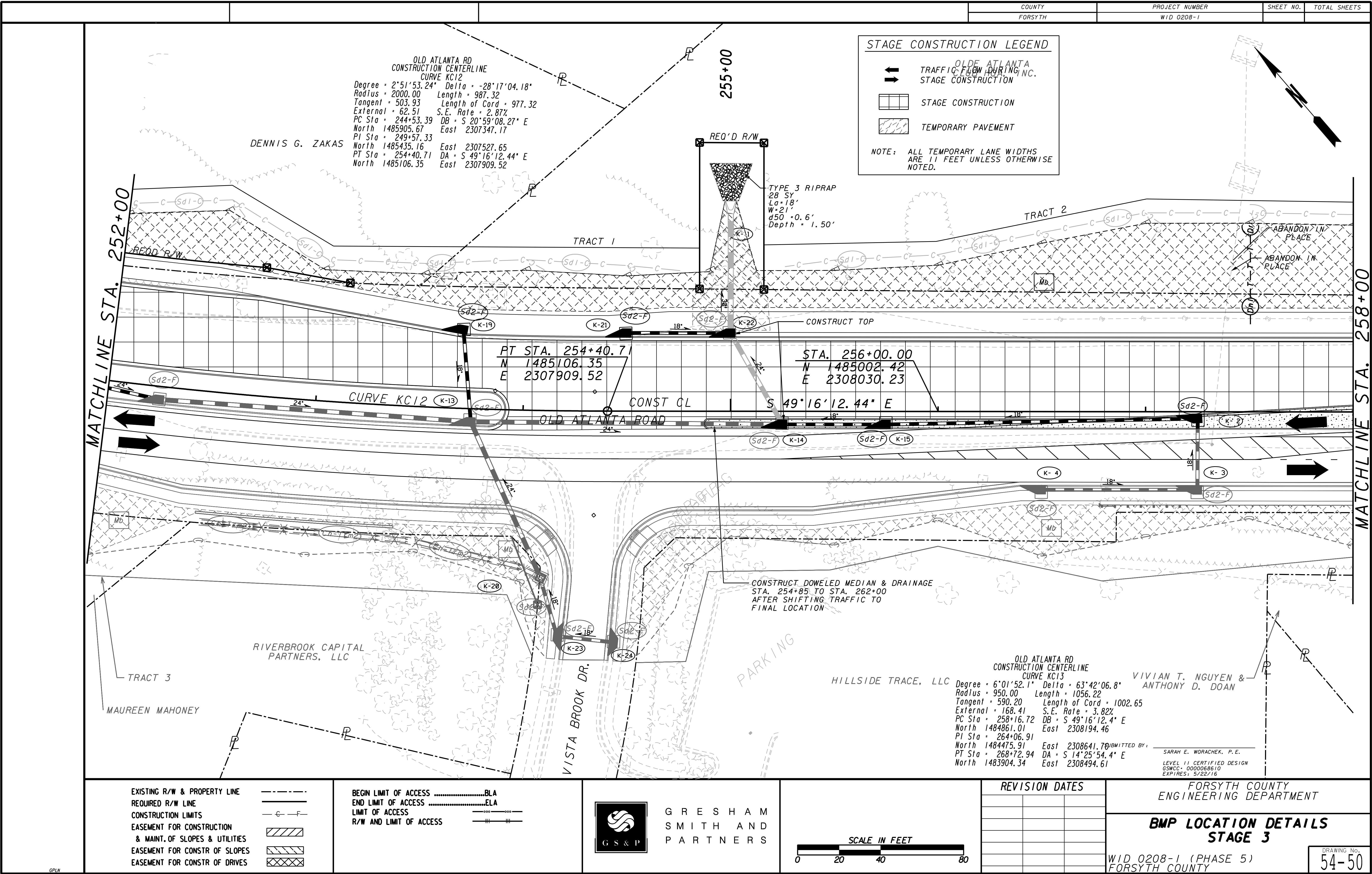


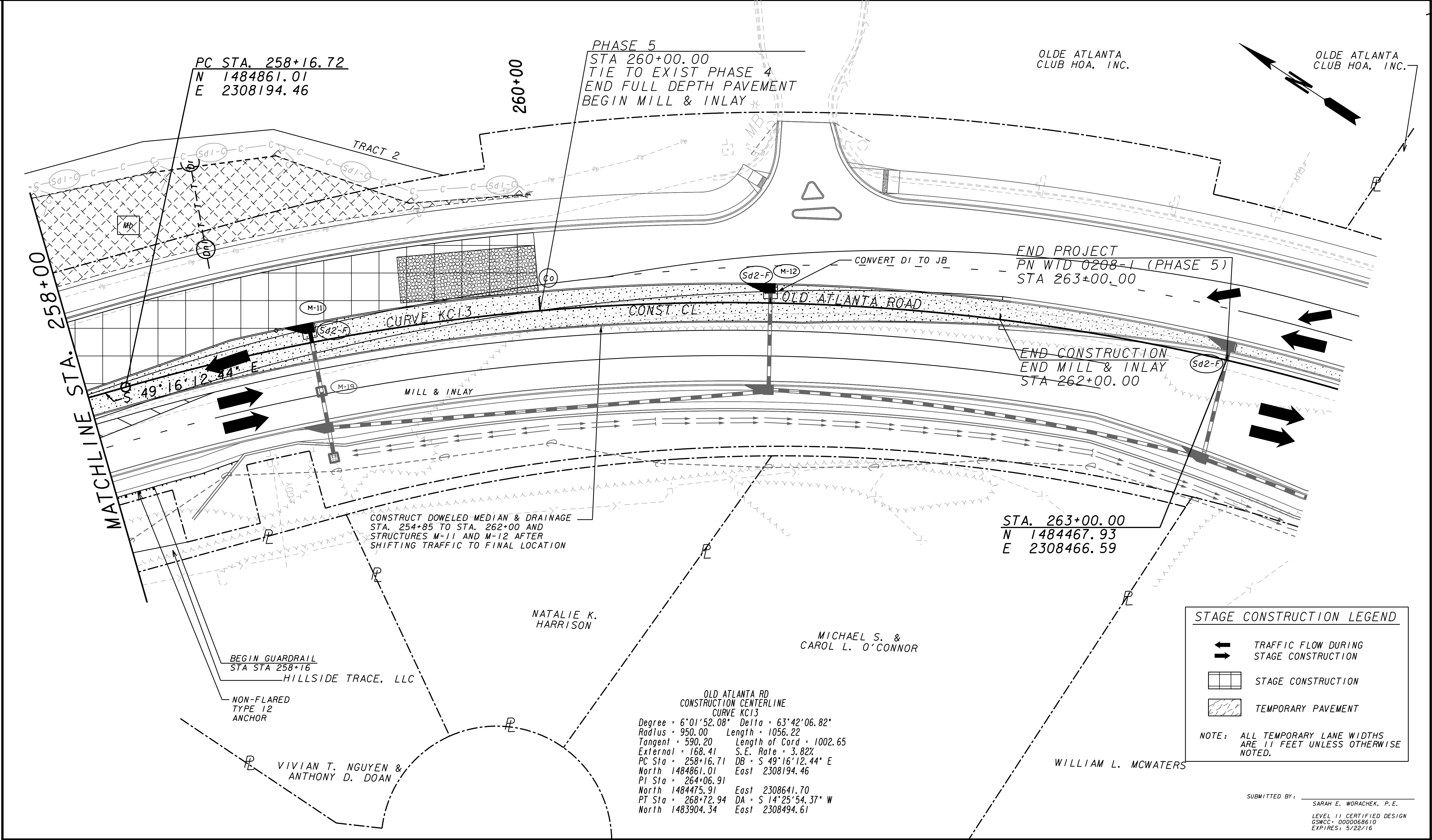
FORSYTH COUNTY
ENGINEERING DEPARTMENT

BMP LOCATION DETAILS
STAGE 3

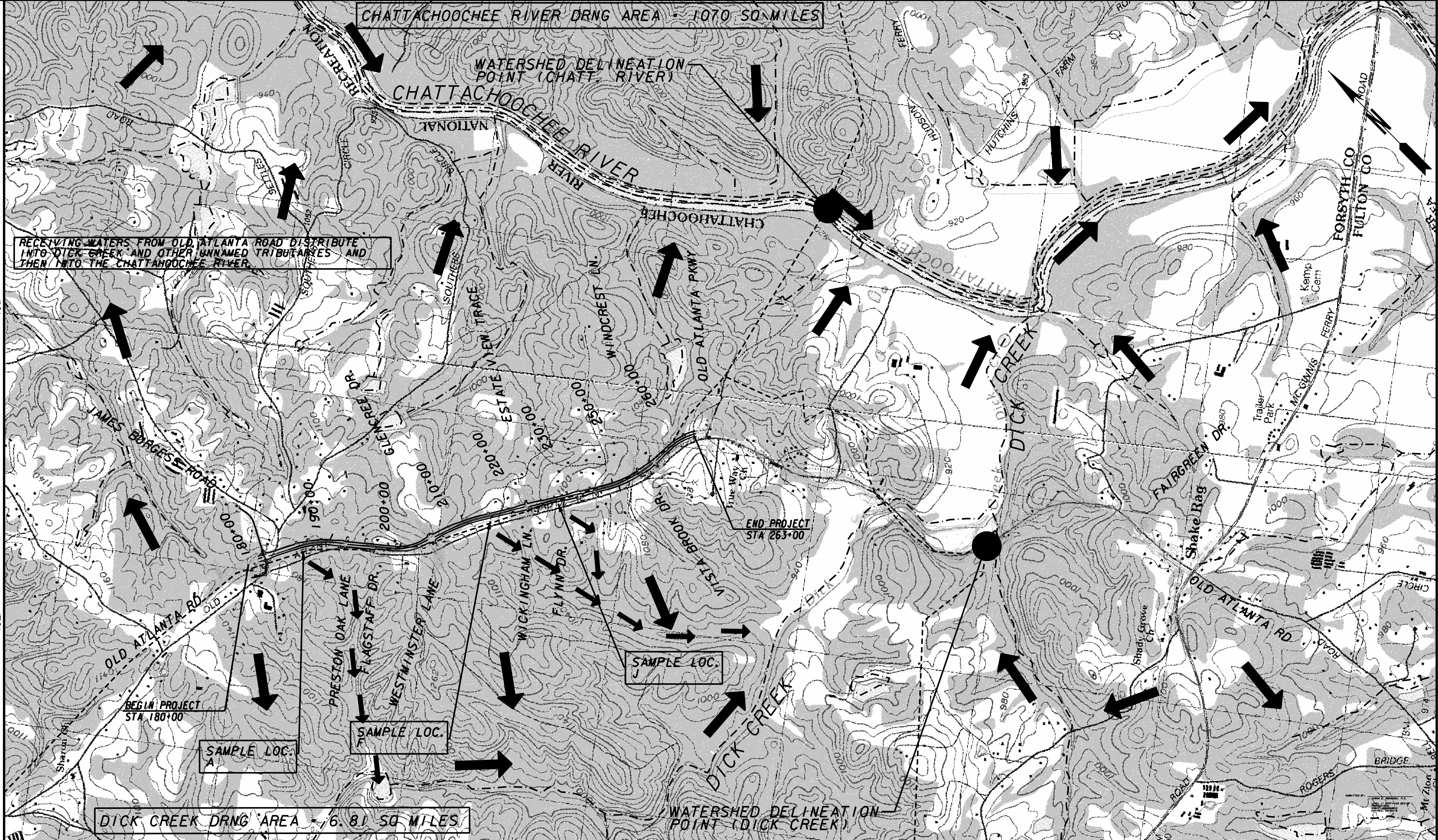
WID 0208-1 (PHASE 5)
FORSYTH COUNTY

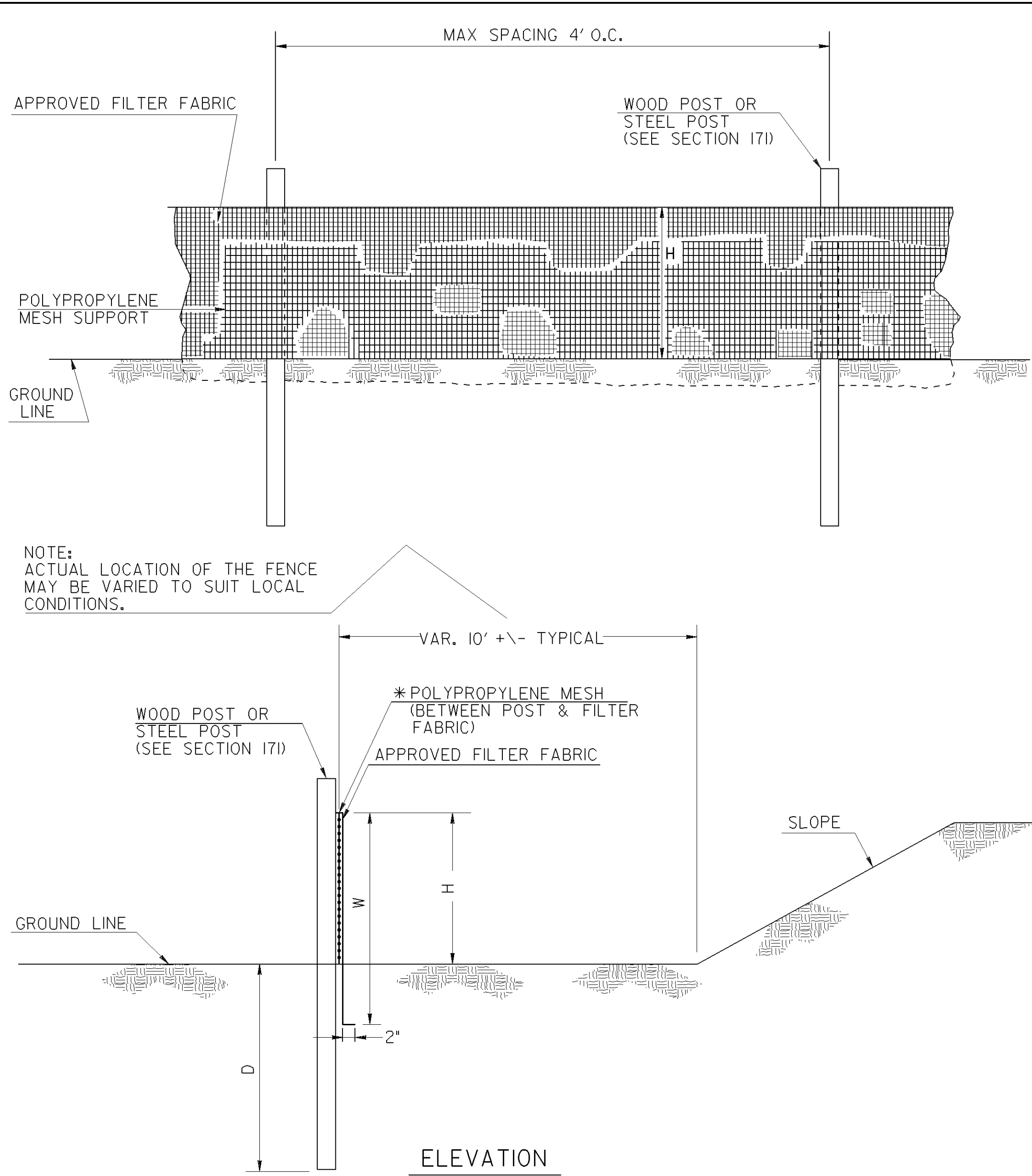
DRAWING No.
54-49



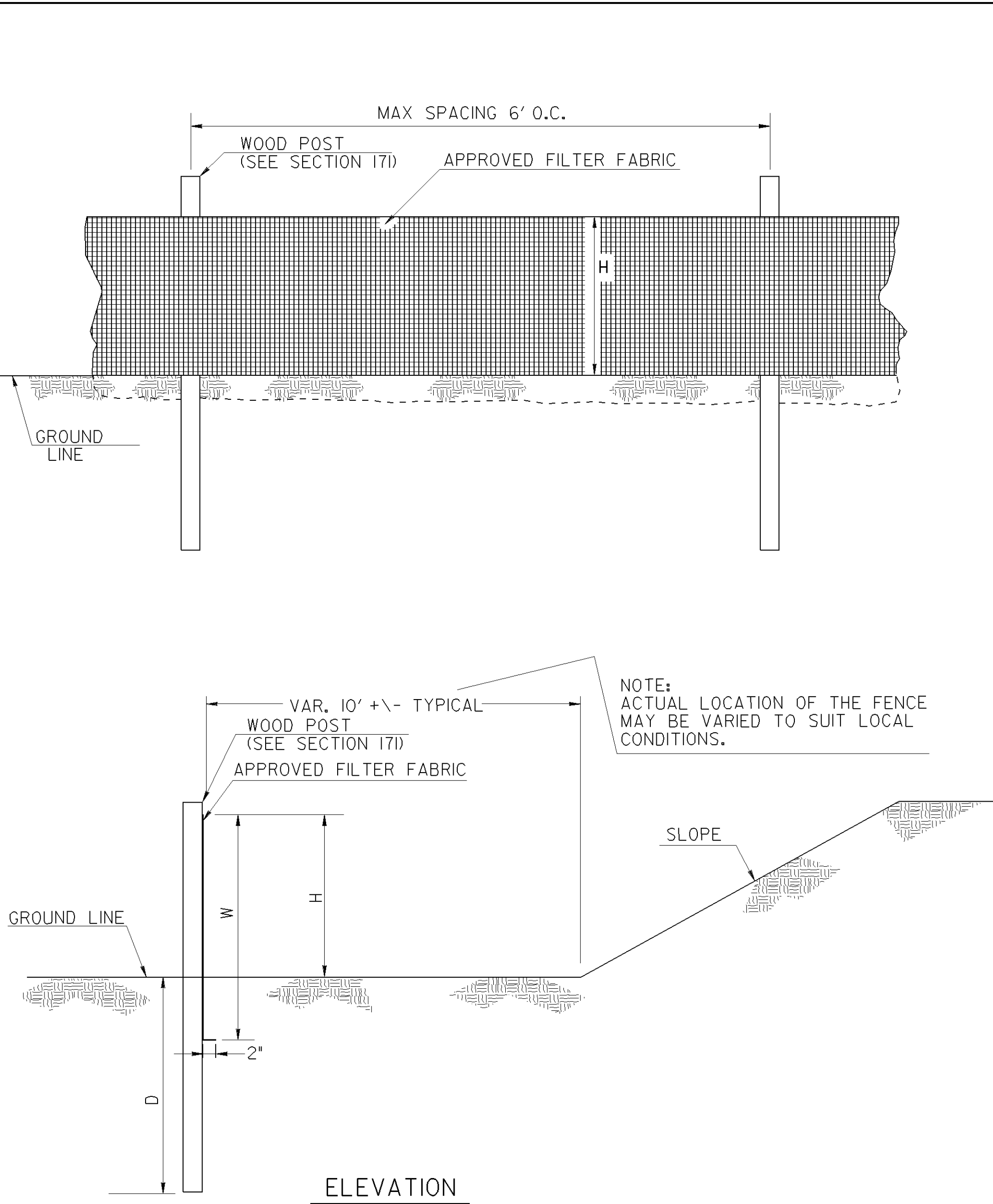


EXISTING R/W & PROPERTY LINE REQUIRED R/W LINE CONSTRUCTION LIMITS EASEMENT FOR CONSTRUCTION & MAINT. OF SLOPES & UTILITIES EASEMENT FOR CONSTR OF SLOPES EASEMENT FOR CONSTR OF DRIVES	BEGIN LIMIT OF ACCESSBLA END LIMIT OF ACCESSELA LIMIT OF ACCESS R/W AND LIMIT OF ACCESS	 GRESHAM SMITH AND PARTNERS	REVISION DATES	FORSYTH COUNTY ENGINEERING DEPARTMENT BMP LOCATION DETAILS STAGE 3 WID 0208-1 (PHASE 5) FORSYTH COUNTY	DRAWING No. 54-51
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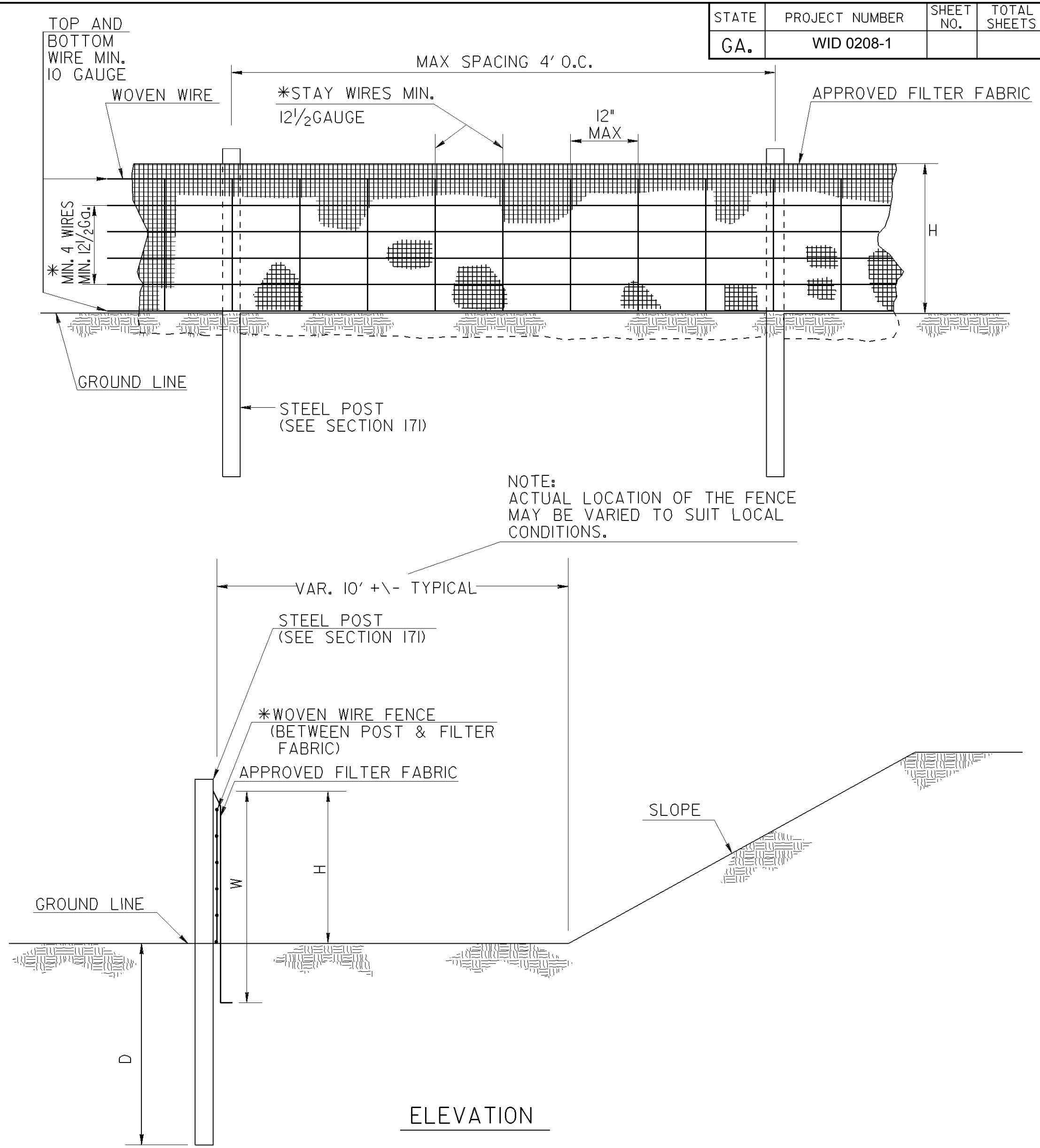




SINGLE ROW TYPE C SILT FENCE WITH POLYPROPYLENE MESH SUPPORT



SINGLE ROW TYPE A SILT FENCE



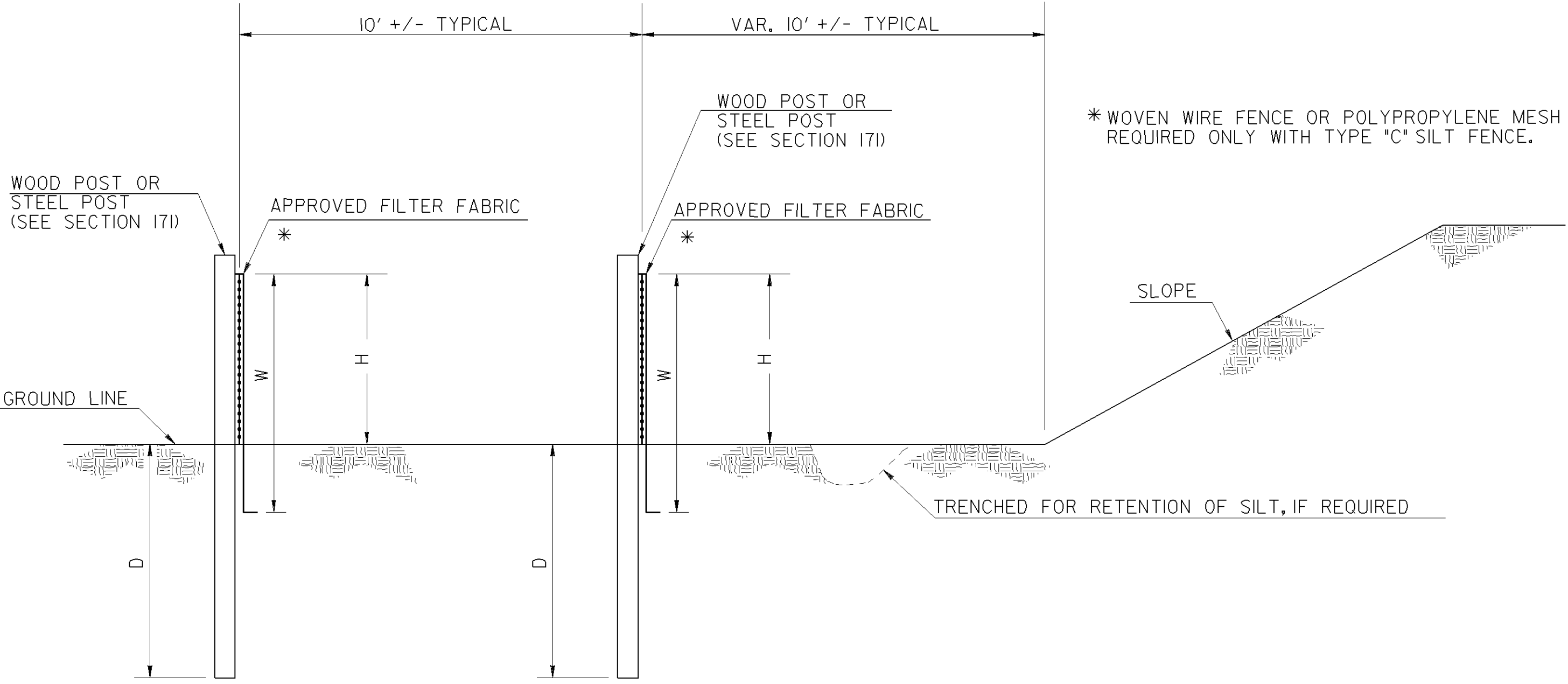
SINGLE ROW TYPE C SILT FENCE WITH WOVEN WIRE SUPPORT

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

- NOTES:
1. WIRE STAPLES SHALL BE AT LEAST 17 GAUGE, WITH LEGS AT LEAST 1/2 INCHES LONG AND A CROWN AT LEAST 3/4 INCHES WIDE. NAILS SHALL BE AT LEAST 14 GAUGE, 1 INCH LONG, WITH BUTTON HEADS AT LEAST 3/4 INCHES WIDE.
 2. NAILS OR STAPLES SHALL BE EVENLY PLACED WITH AT LEAST 5 PER POST FOR TYPE A FENCE AND 4 PER POST FOR TYPE C FENCE.
 3. THE VERTICAL WIRES FOR THE WOVEN WIRE SUPPORT FENCE SHALL HAVE A MAXIMUM SPACING OF 12 INCHES. THE TOP AND BOTTOM WIRES SHALL BE AT LEAST 10 GAUGE AND ALL OTHER WIRES SHALL BE AT LEAST 12 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 APPROVED SILT FENCE FABRIC.
 8. TEMPORARY SILT FENCE SHALL NOT BE PLACED WITHIN STATE WATERS UNLESS PERMITTED.

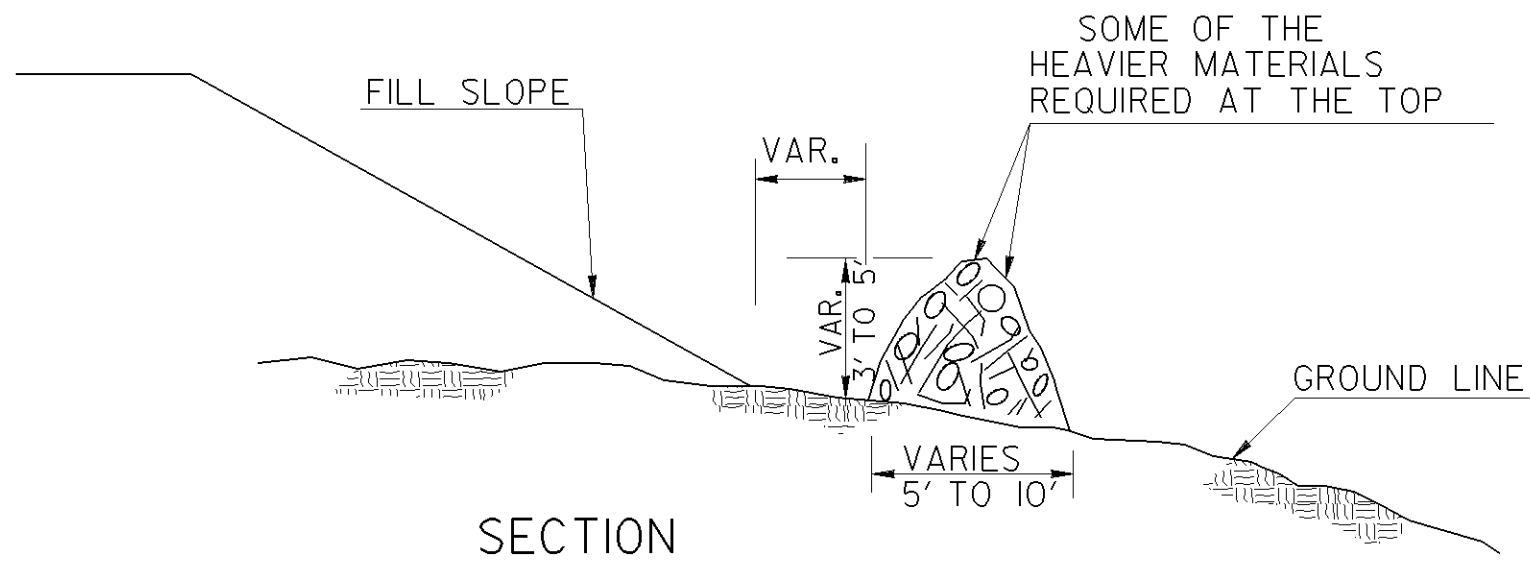
	DATE	DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA
	REVISION	CONSTRUCTION DETAILS TEMPORARY SILT FENCE
	BY	NO SCALE REV. AND REDRAWN JAN. 2011
		NUMBER D-24A (SHEET 1 OF 4)

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
	WID 0208-1		

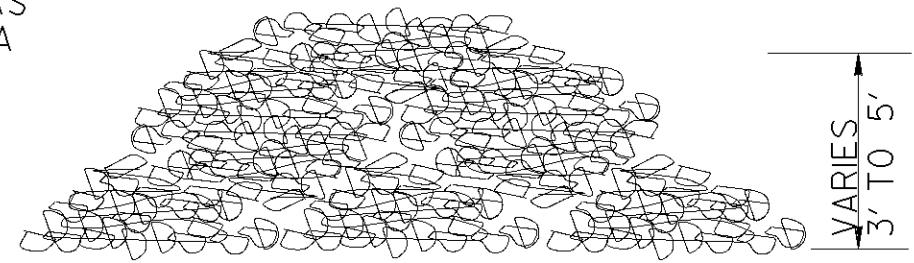


ELEVATION
DOUBLE ROW SILT FENCE

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.

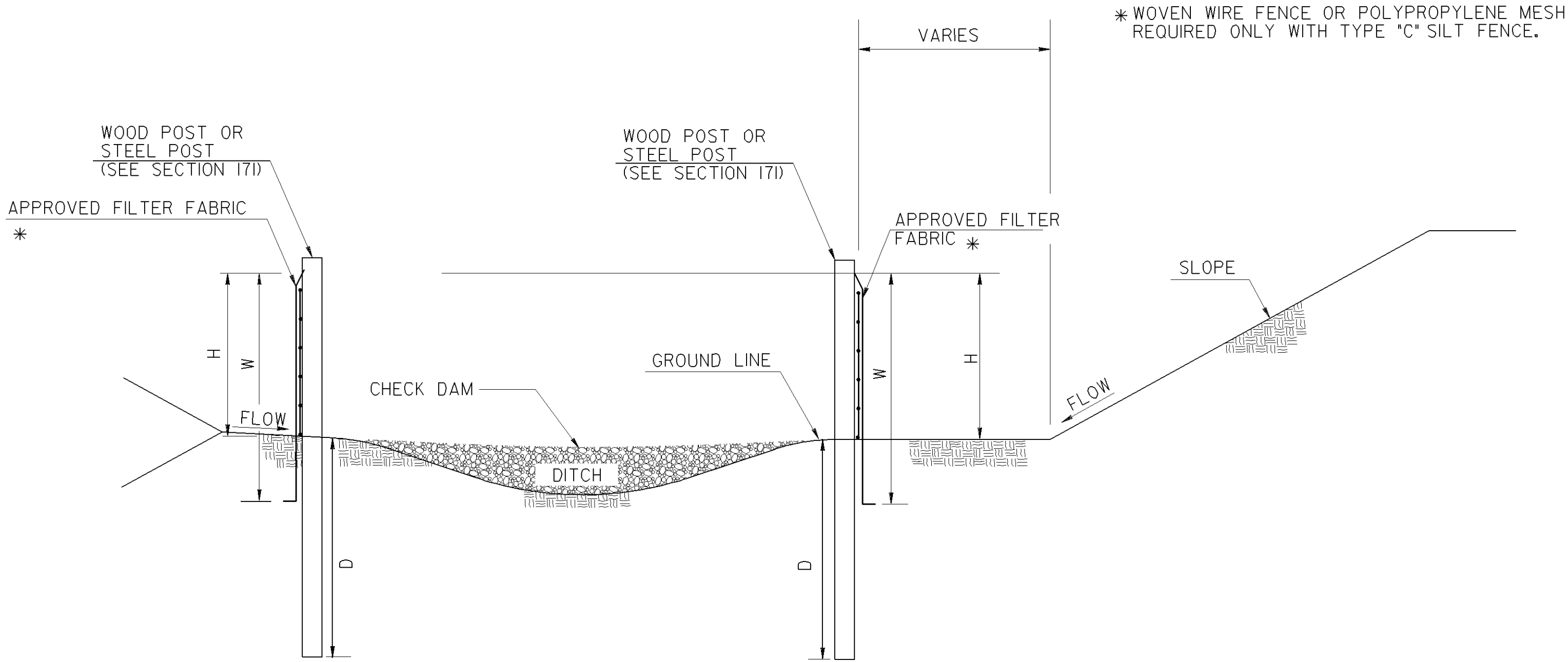


NOTE: INTERMINGLE BRUSH, LOGS, ETC. SO AS NOT TO FORM A SOLID DAM.



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

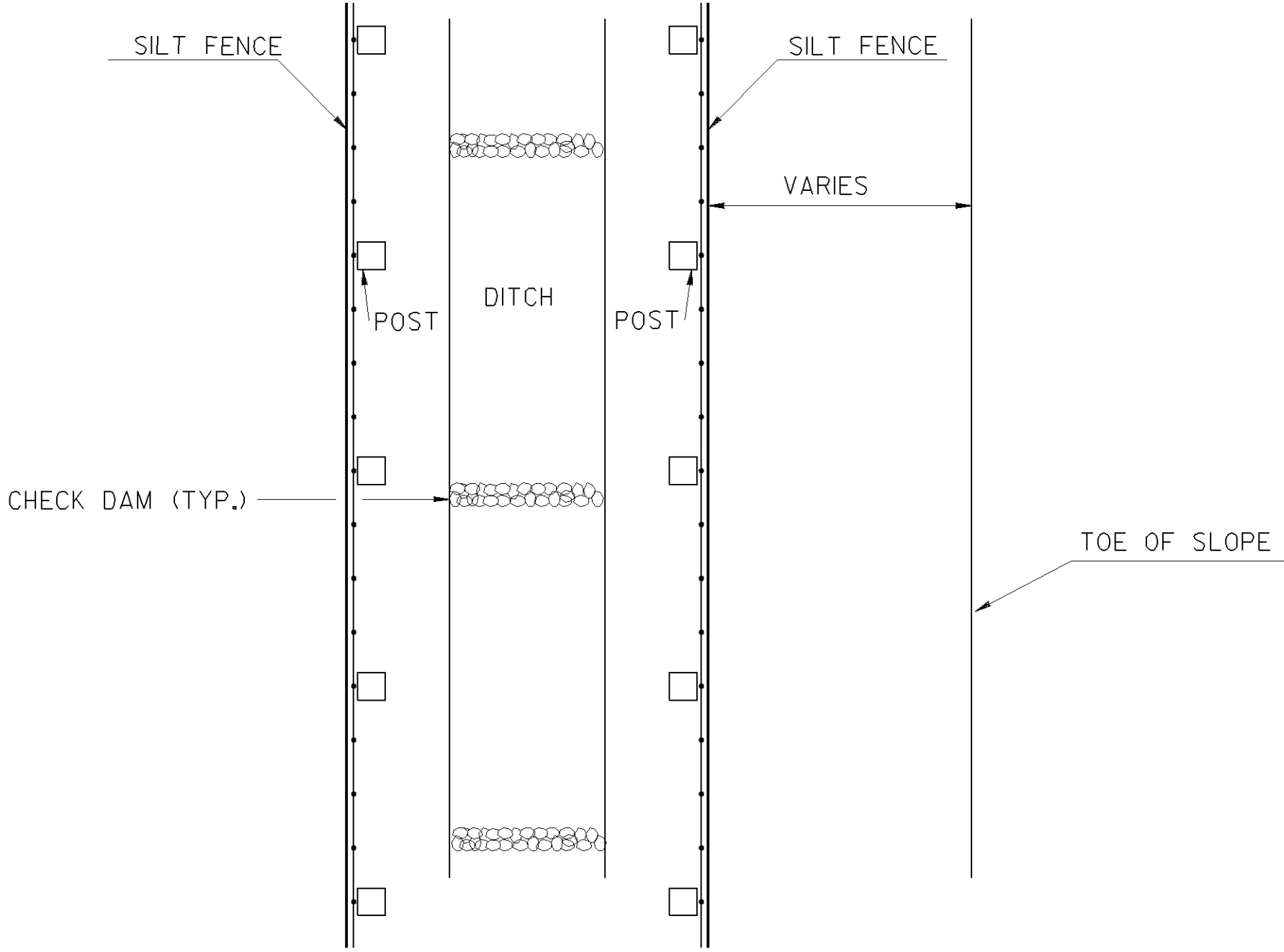
BRUSH BARRIER DETAILS
(FOR USE IN RURAL AREAS)



ELEVATION

SILT FENCE
PERIMETER INSTALLATION ALONG DITCH SECTION

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

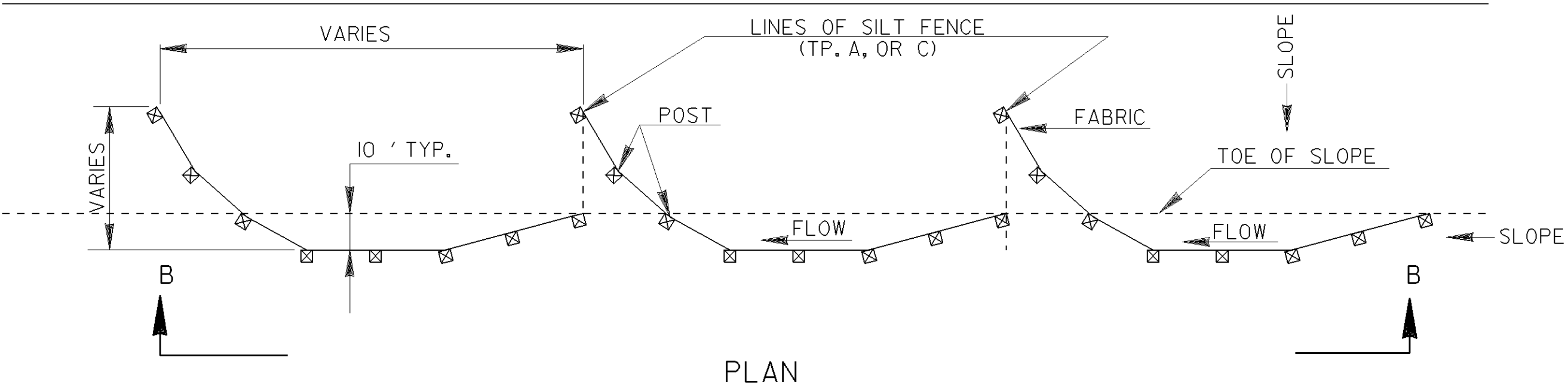
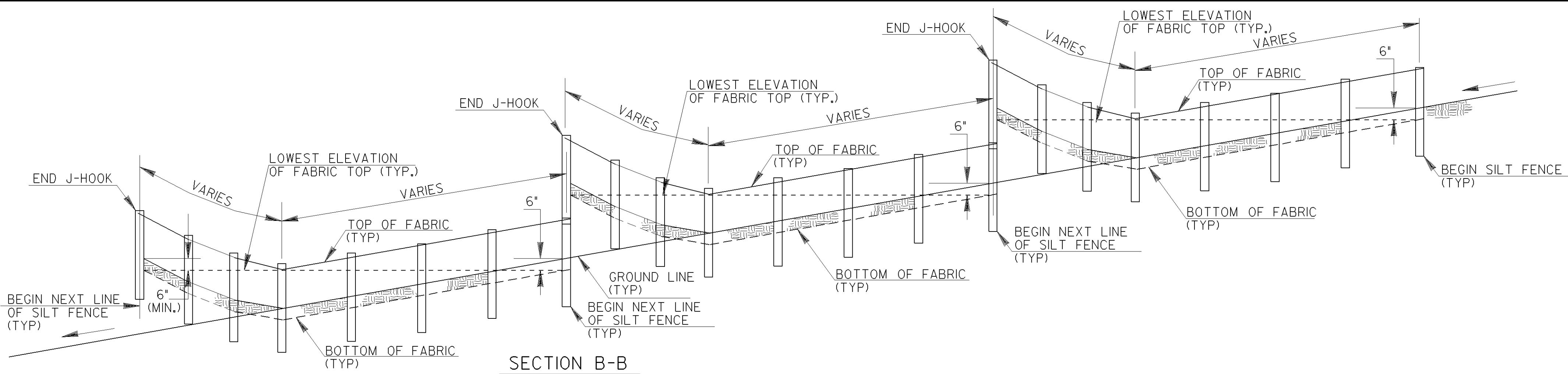


PLAN

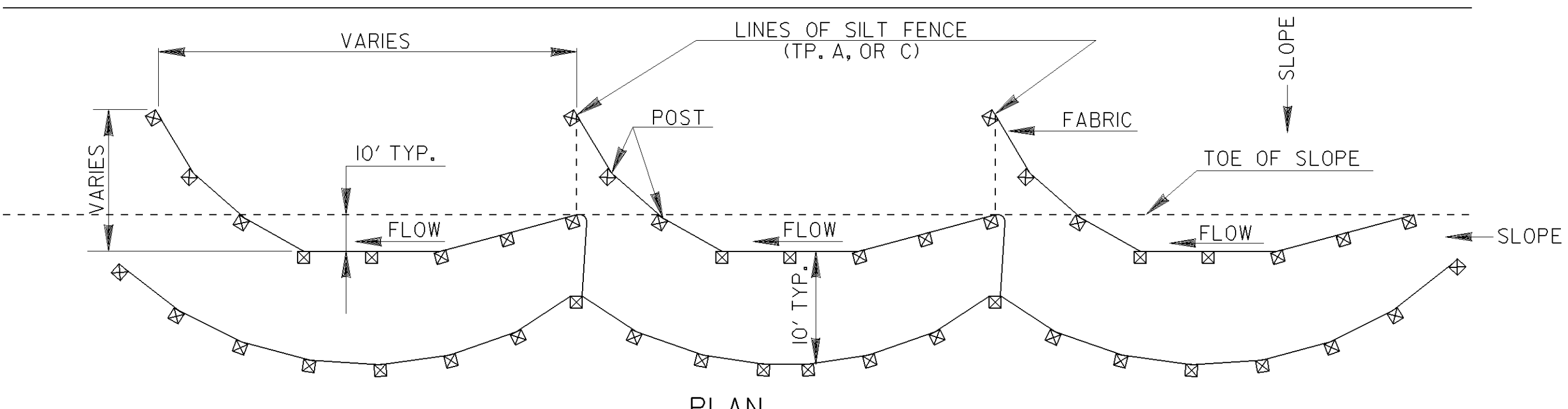
NOTE: TEMPORARY SILT FENCE SHALL NOT BE PLACED WITHIN STATE WATERS.

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

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	WID 0208-1		



SINGLE ROW SILT FENCE

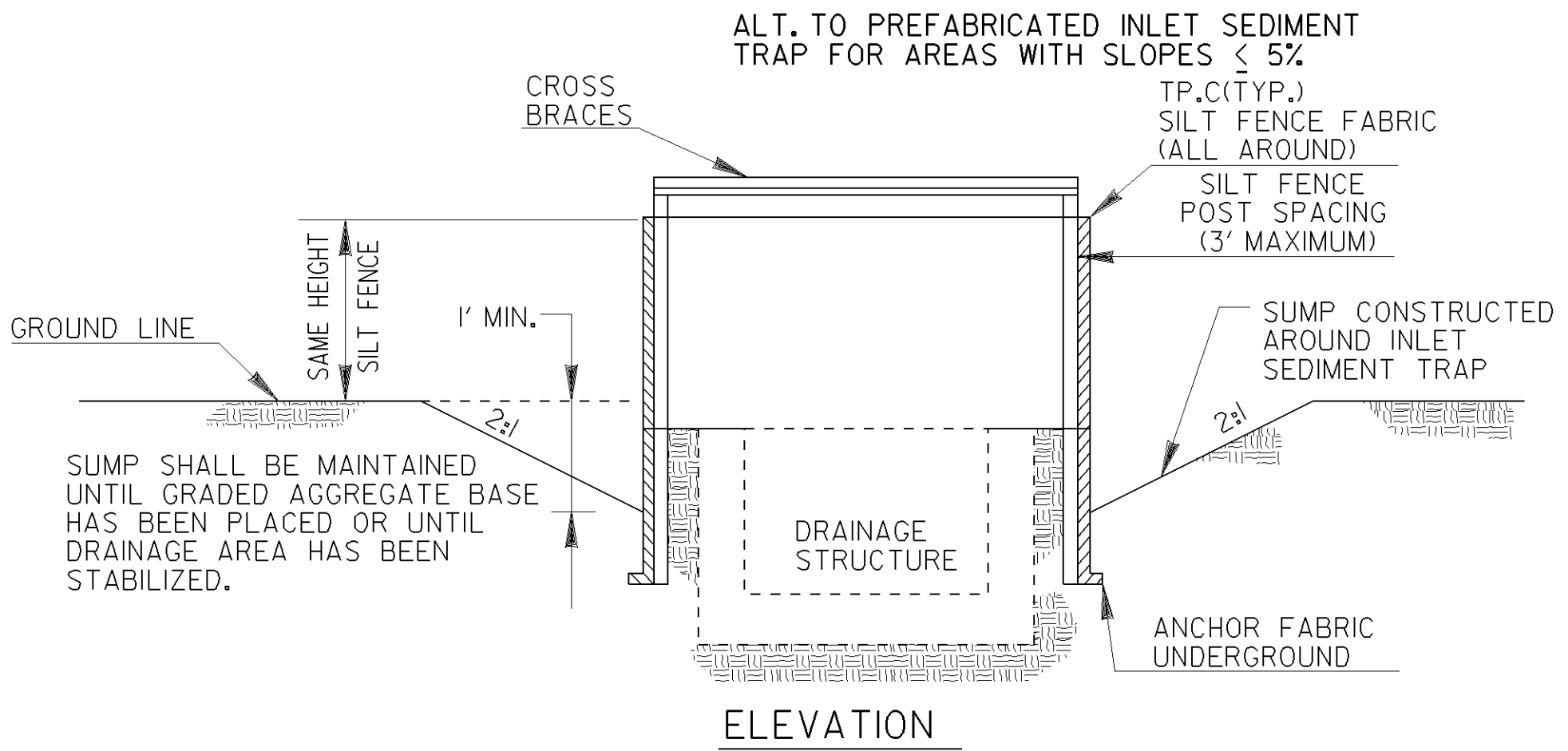


DOUBLE ROW SILT FENCE

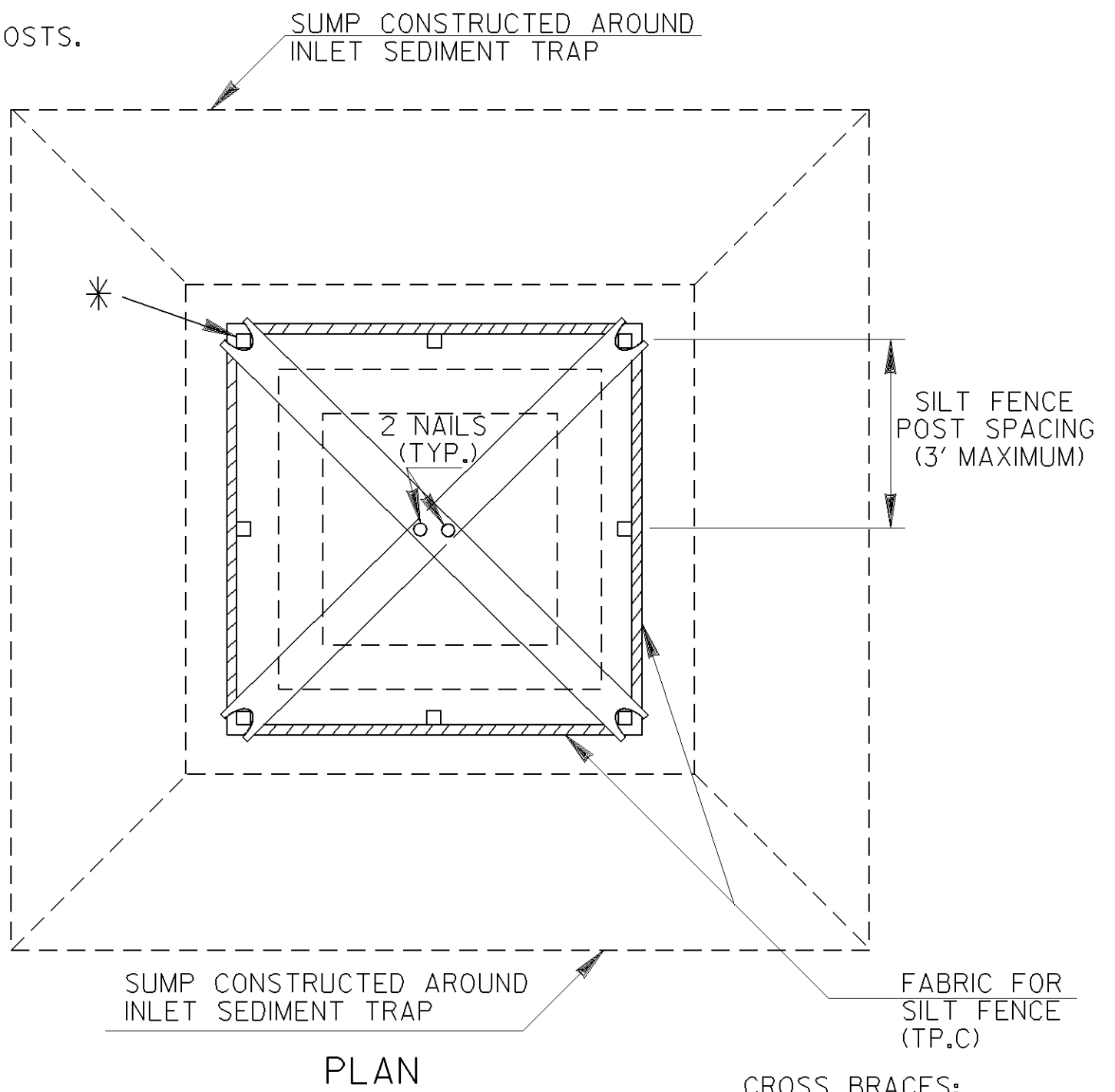
TYPICAL J HOOK SPACING		
SLOPE PERCENT	TYPE OF SILT FENCE	MINIMUM SPACING (FEET)
1% TO 2%	TYPE A	100' ±
2% TO 3%	TYPE A	50' ±
3% TO 4%	TYPE C	50' ±
4% TO 5%	TYPE C	25' ±

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

TYPICAL LOCATION AROUND DROP INLETS



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



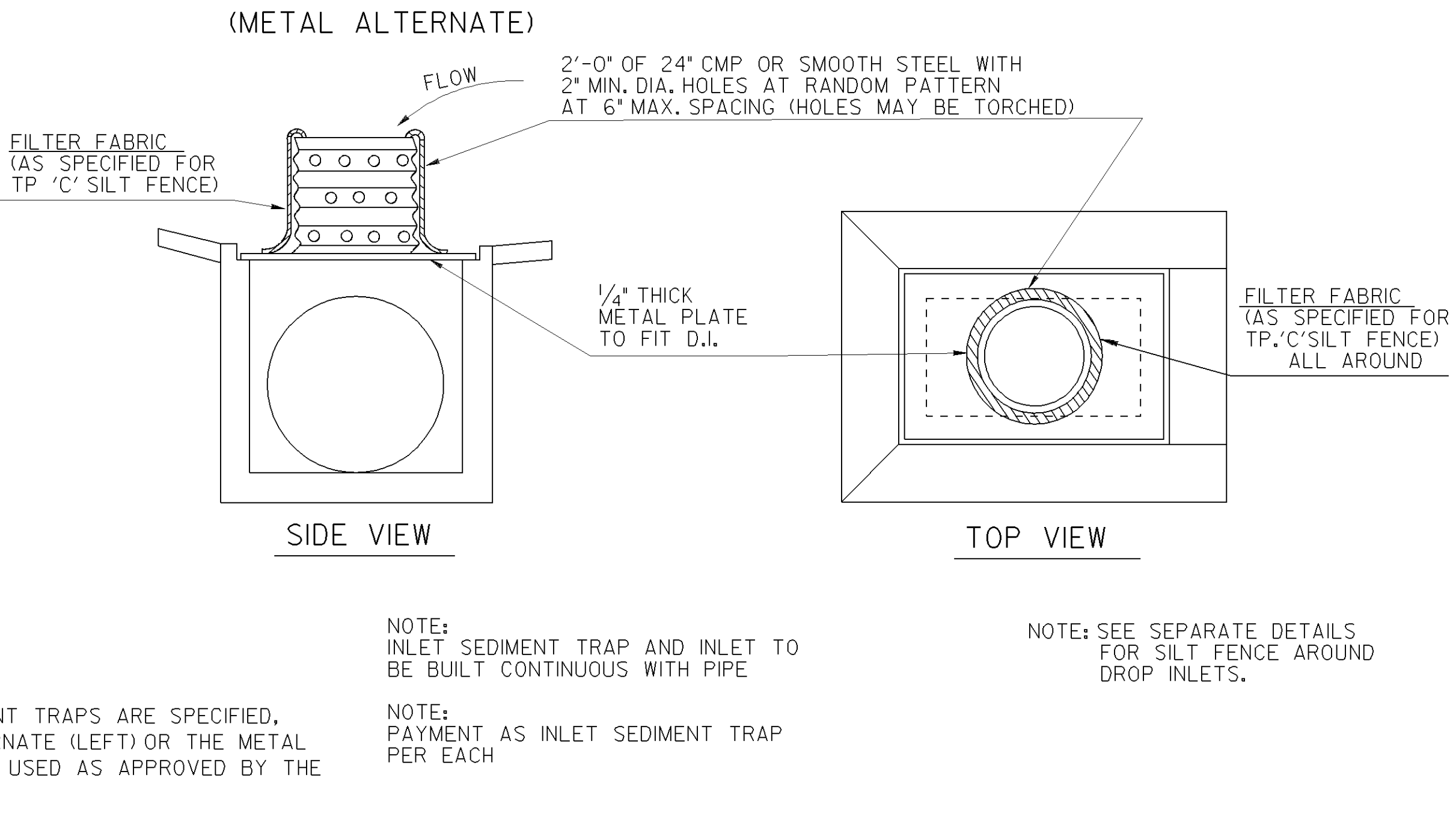
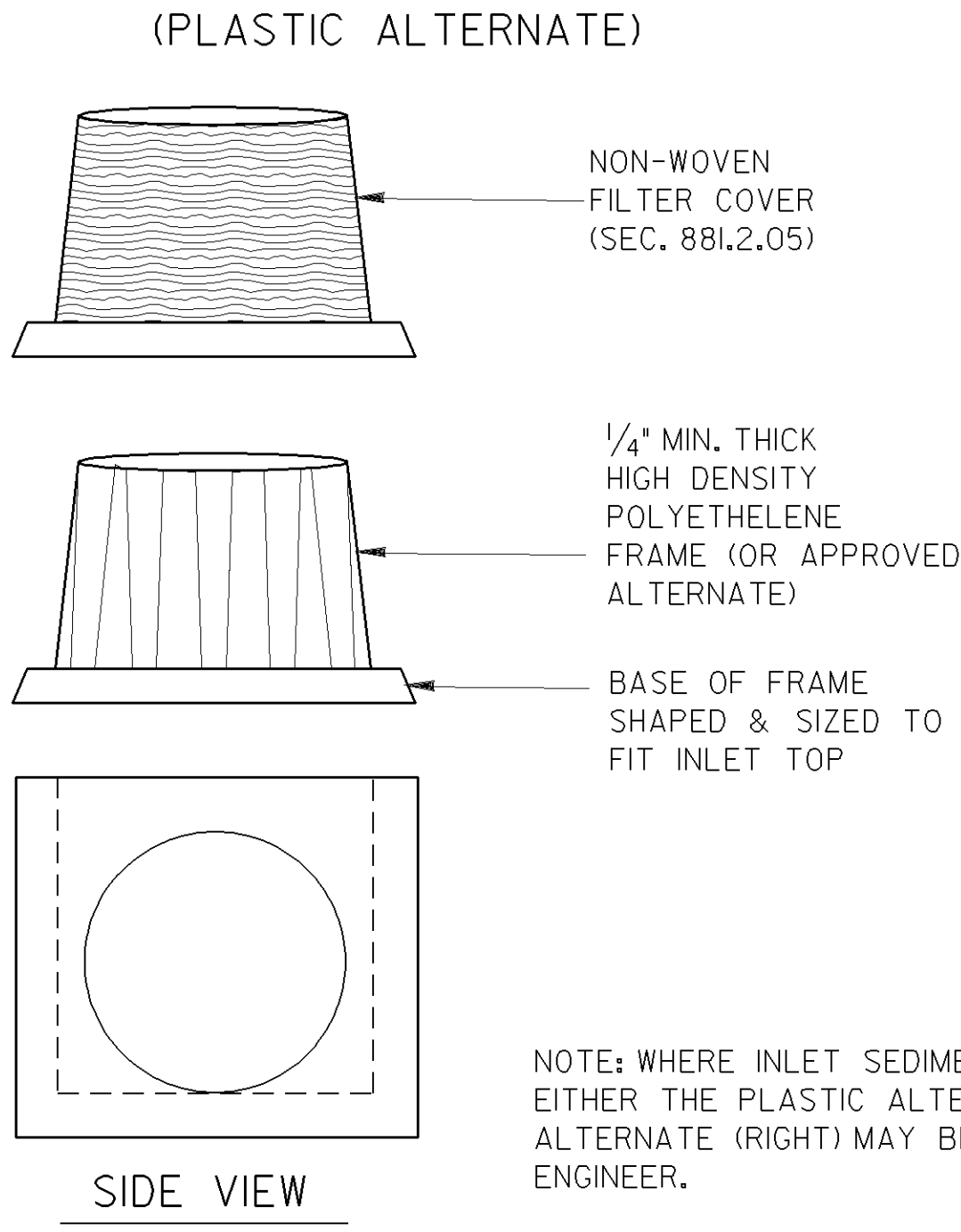
CROSS BRACES:
TWO - 2 X 4's WITH ENDS TO FIT POST, PROVIDING STURDY SUPPORT, OR AN APPROVED ALTERNATE

NOTE:
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.



INLET SEDIMENT TRAP - FOR DROP INLETS

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

NOTE:
PAYMENT AS INLET SEDIMENT TRAP PER EACH

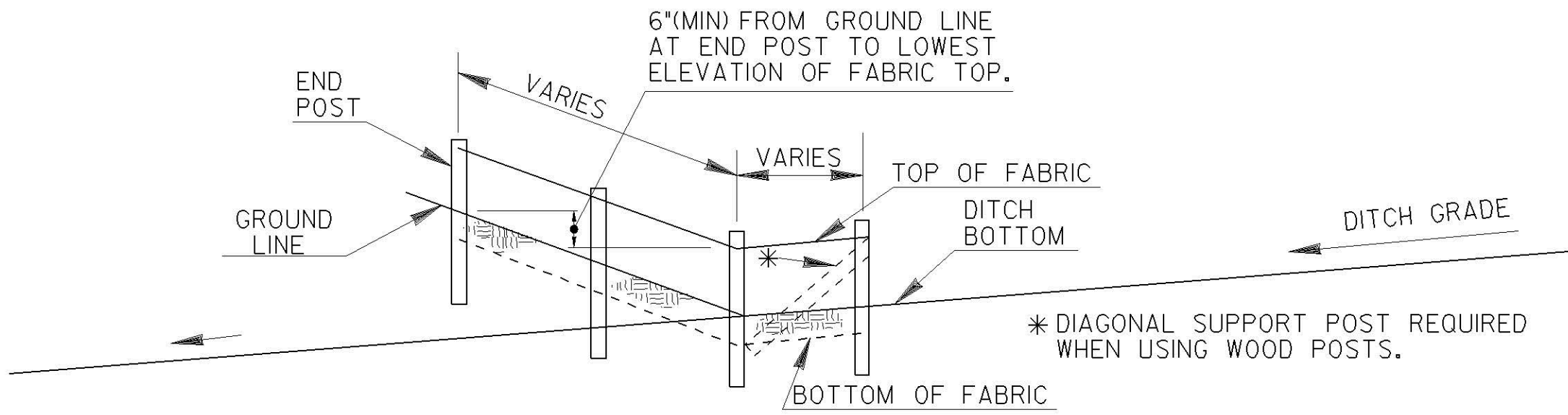
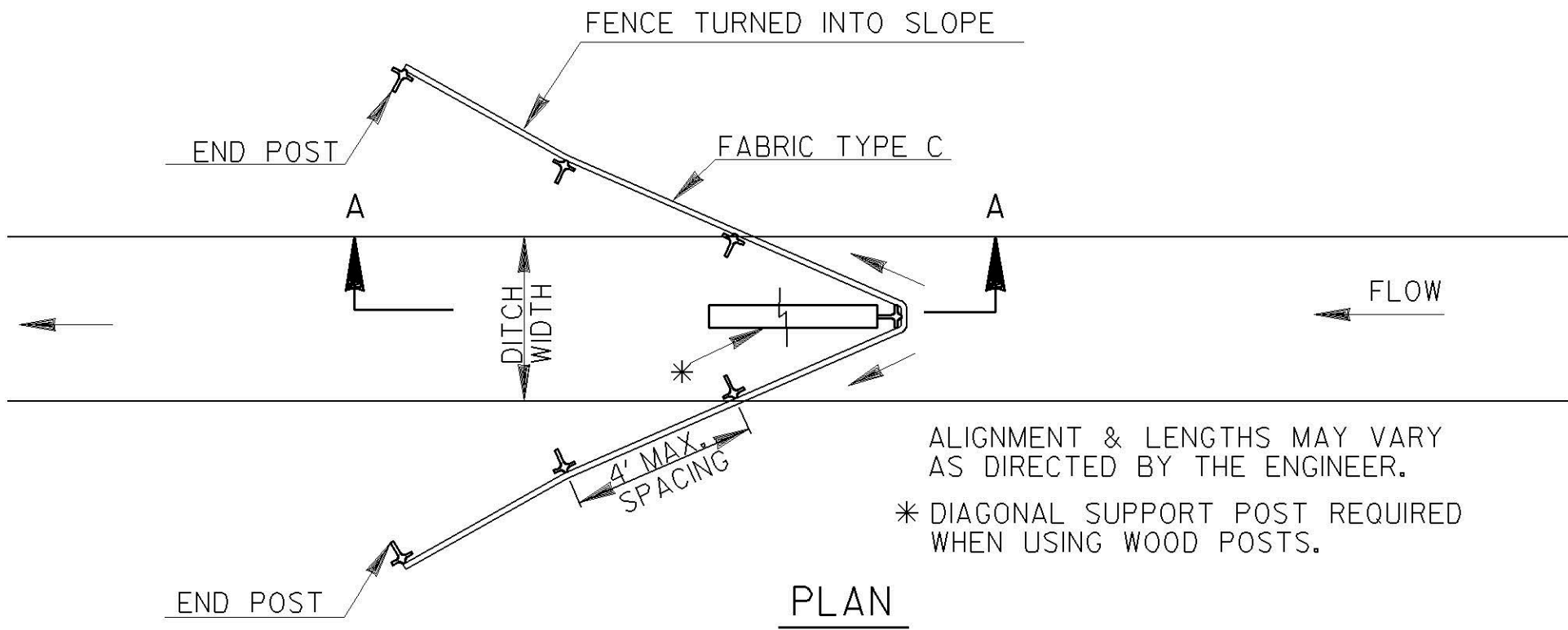
NOTE: SEE SEPARATE DETAILS FOR SILT FENCE AROUND DROP INLETS.

NOTE:
PAYMENT AS INLET SEDIMENT TRAP PER EACH.

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

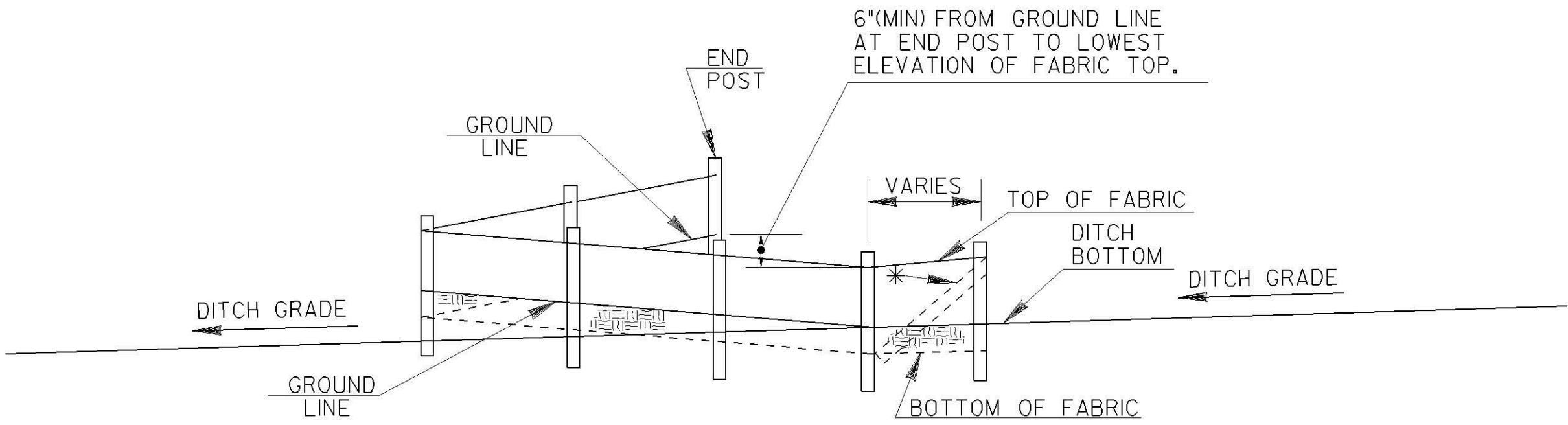
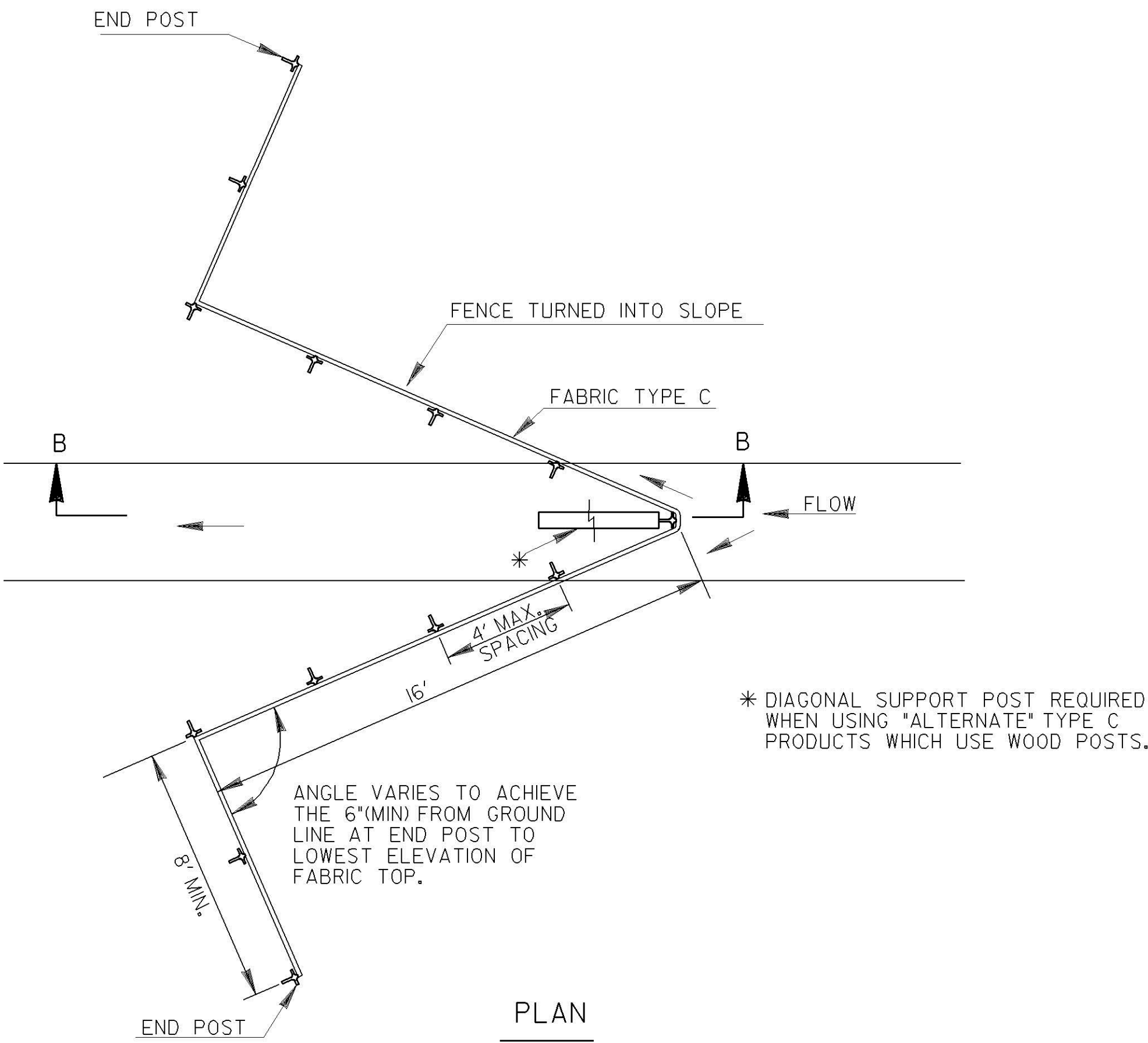
DEPARTMENT OF TRANSPORTATION			STATE OF GEORGIA	
CONSTRUCTION DETAILS			TEMPORARY SILT FENCE	
J-HOOK, INLET SEDIMENT TRAPS			NO SCALE	
DATE			JANUARY 2011	
REVISION			NUMBER	
BY			D-24C	
			(SHEET 3 OF 4)	

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	WID 0208-1		



TYPICAL FABRIC CHECK DAM SPACING	
GRADE OF DITCH	MINIMUM SPACING (FEET)
LESS THAN 1%	100' ±
1% TO 2%	100' ±
2% TO 3%	50' ±
3% TO 4%	50' ±
4% TO 5%	25' ±
4% TO <8%	25' ±

FABRIC CHECK DAM
DITCH WITH SIDE SLOPES 6:1 OR GREATER AND DEPTHS OVER 36"

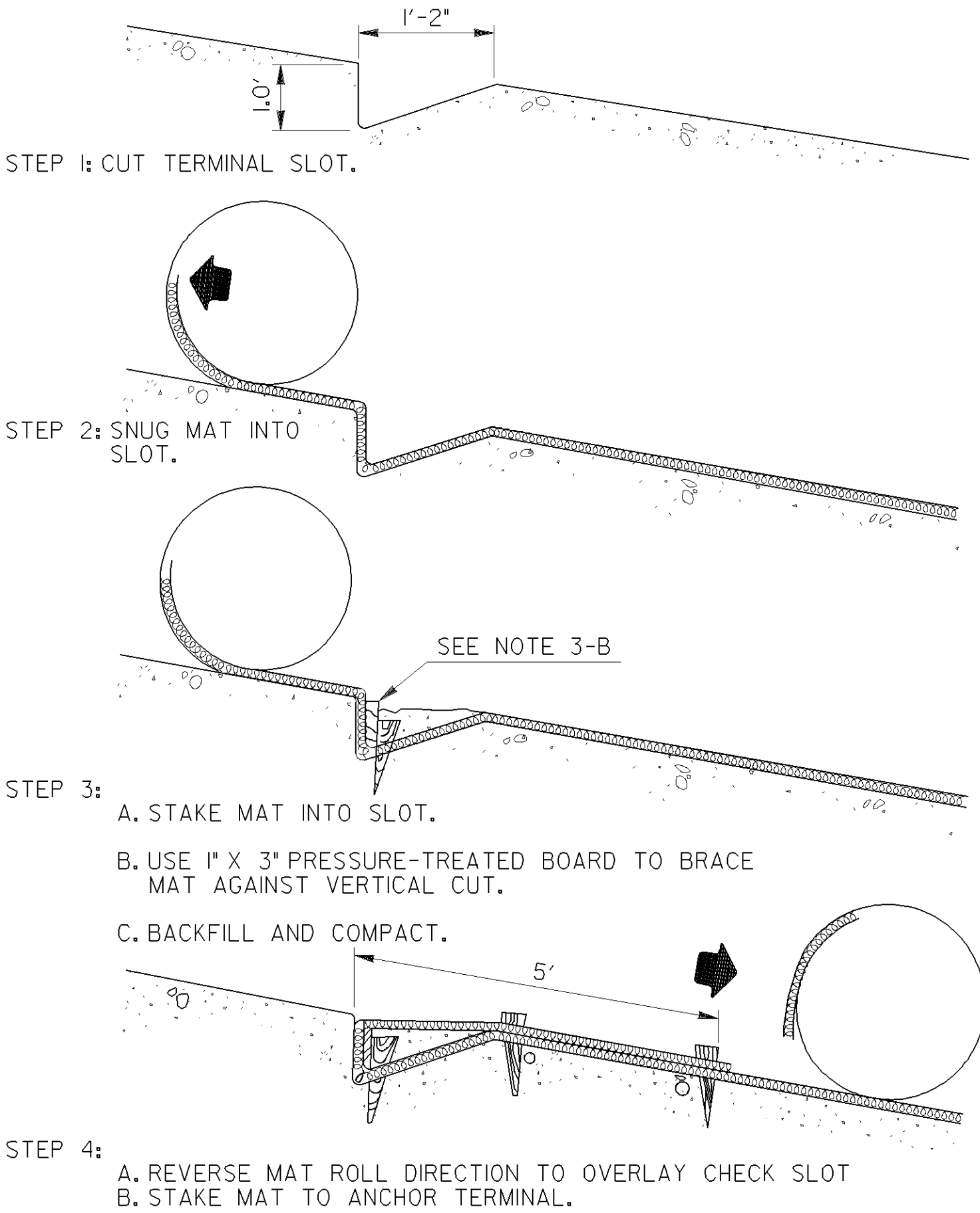


- NOTE:
1. THE MAXIMUM DRAINAGE AREA FOR FABRIC CHECK DAMS SHALL BE 1 ACRE.
 2. TEMPORARY SILT FENCE SHALL NOT BE PLACED WITHIN STATE WATERS.

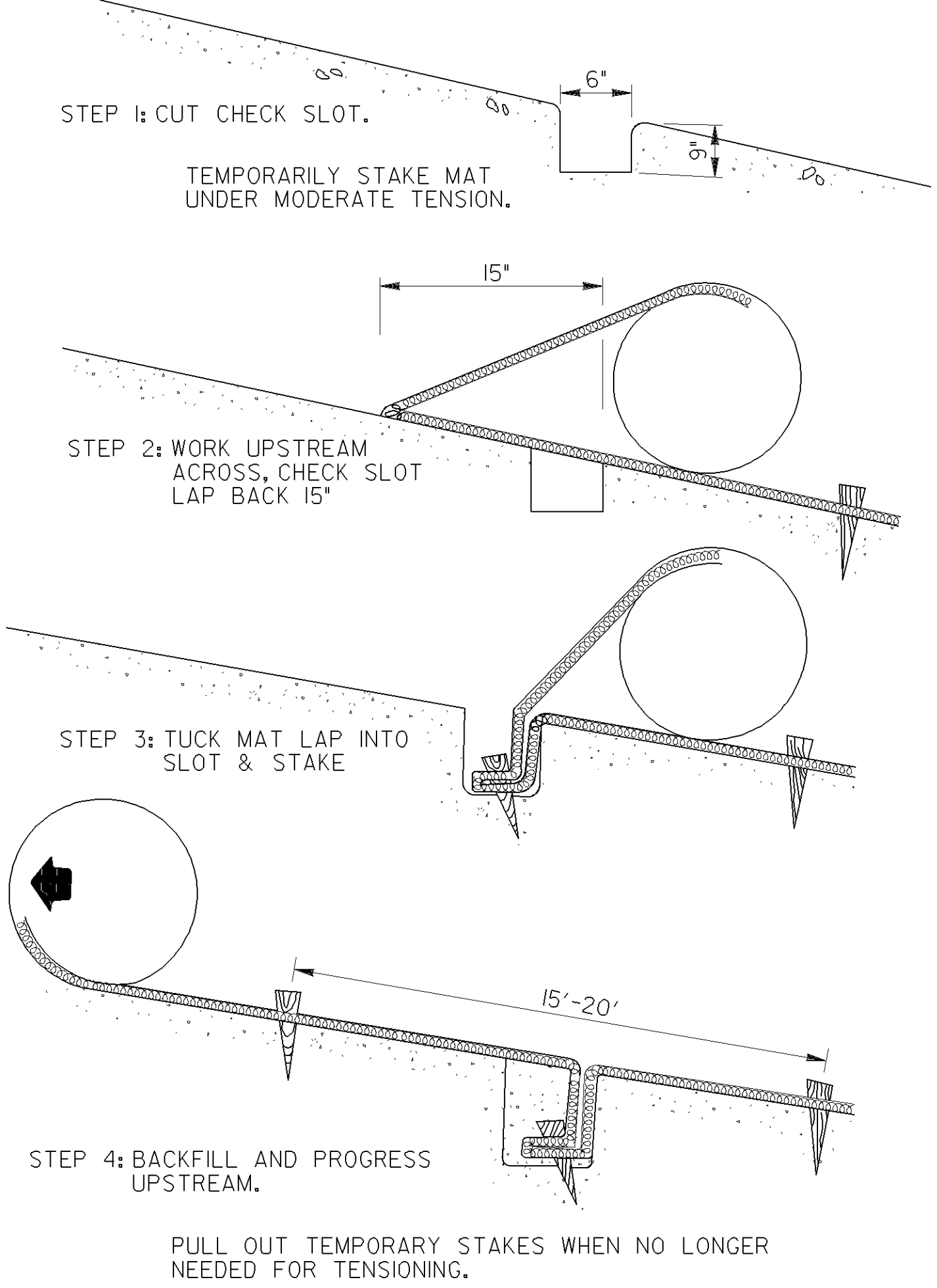
FABRIC CHECK DAM
DITCH WITH SIDE SLOPES FLATTER THAN 6:1 (ALL MEDIANS) OR DEPTHS LESS THAN 36"

		7-14-14	DEPARTMENT OF TRANSPORTATION	
		4-8-14	STATE OF GEORGIA	
REINSTATED	VOIDED SHEET	REVISION	CONSTRUCTION DETAILS	
			TEMPORARY SILT FENCE	
FABRIC CHECK DAM				
NO SCALE				
JANUARY 2011				
B/O	B/O	BY	NUMBER	
			D-24D	
			(SHEET 4 OF 4)	

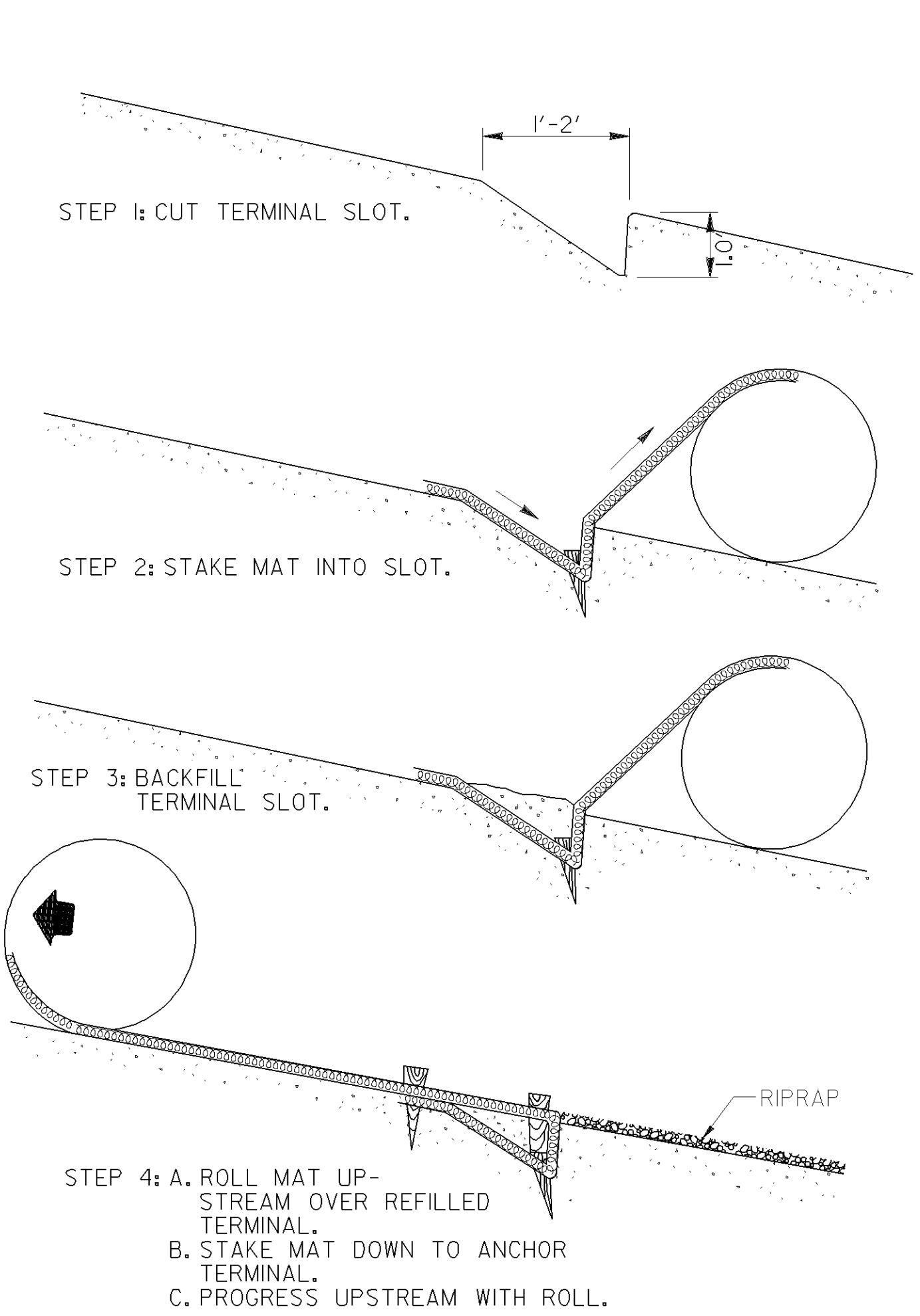
STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	WID 0208-1		



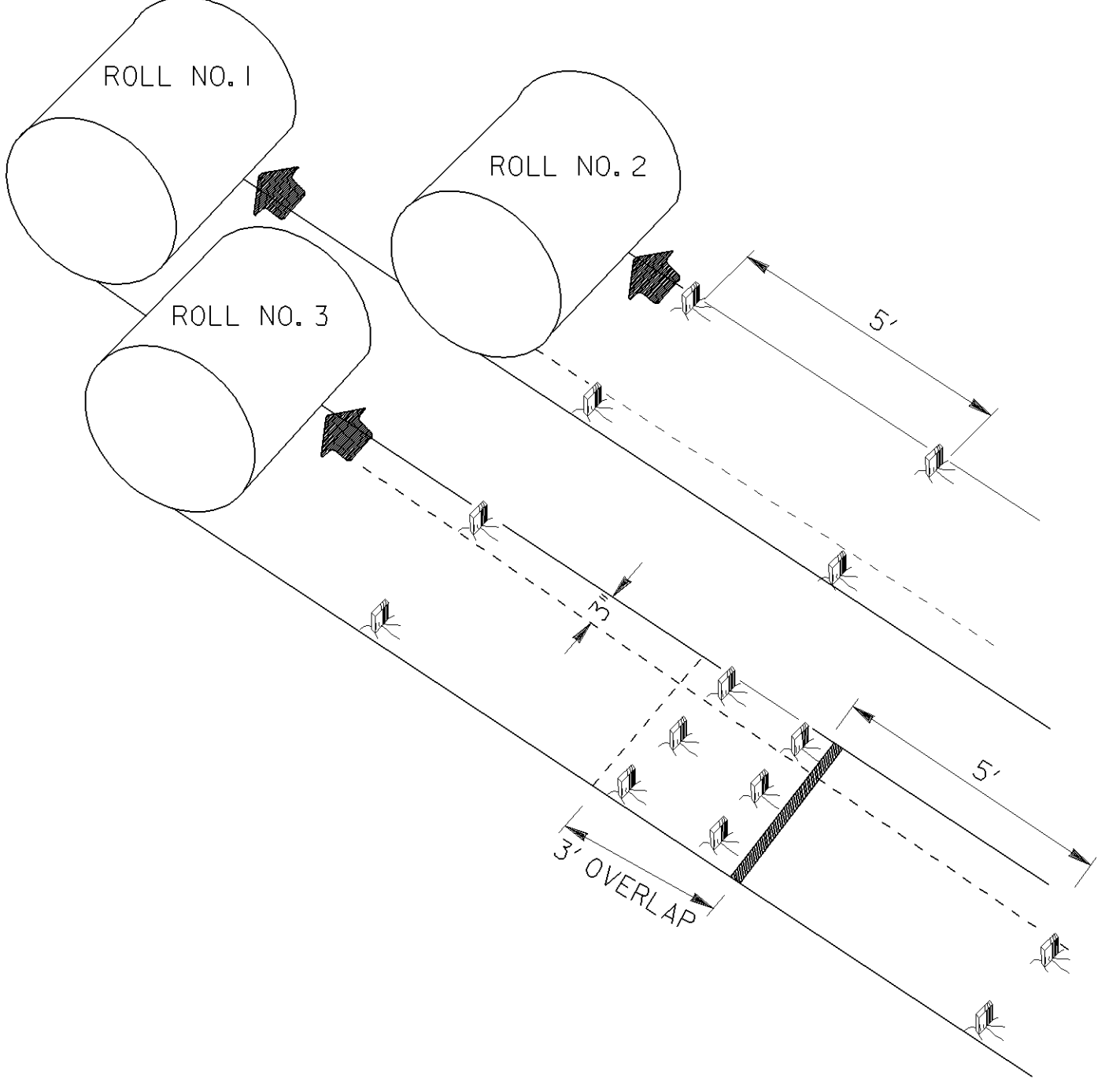
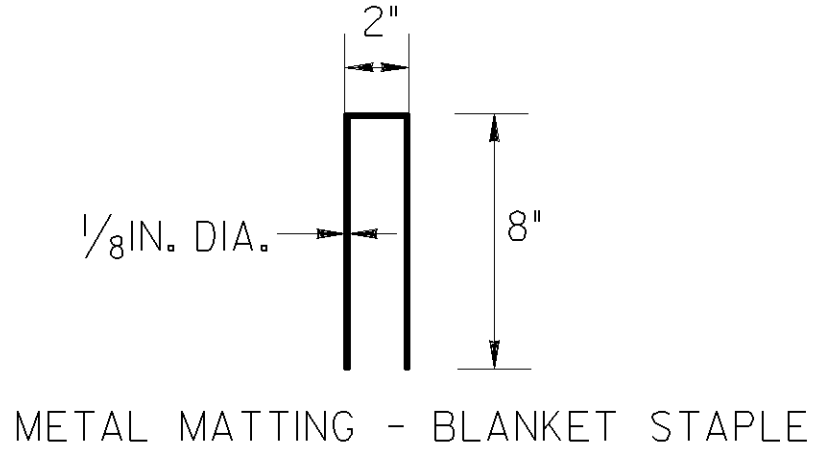
UPSTREAM TERMINAL



TRANSVERSE CHECK SLOT

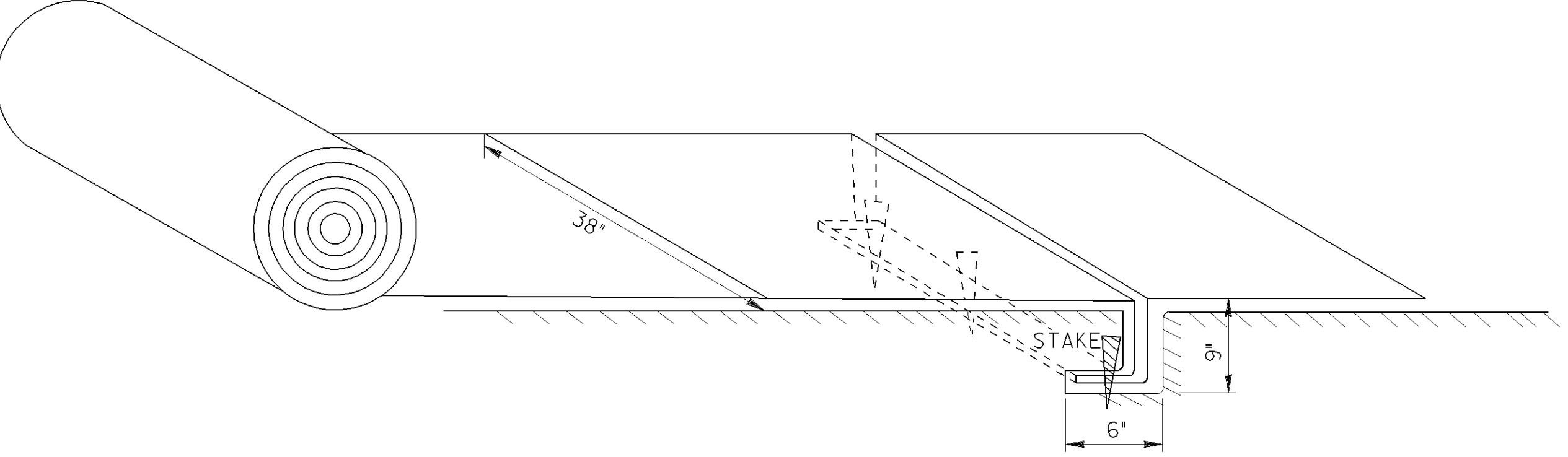


DOWNSTREAM TERMINAL

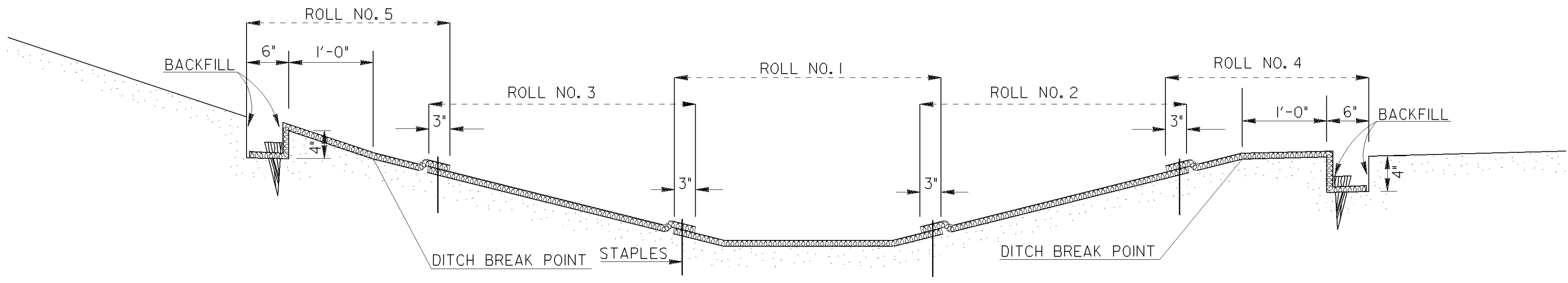


SEQUENTIAL ROLL RUN OUT IN CHANNELS

- 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

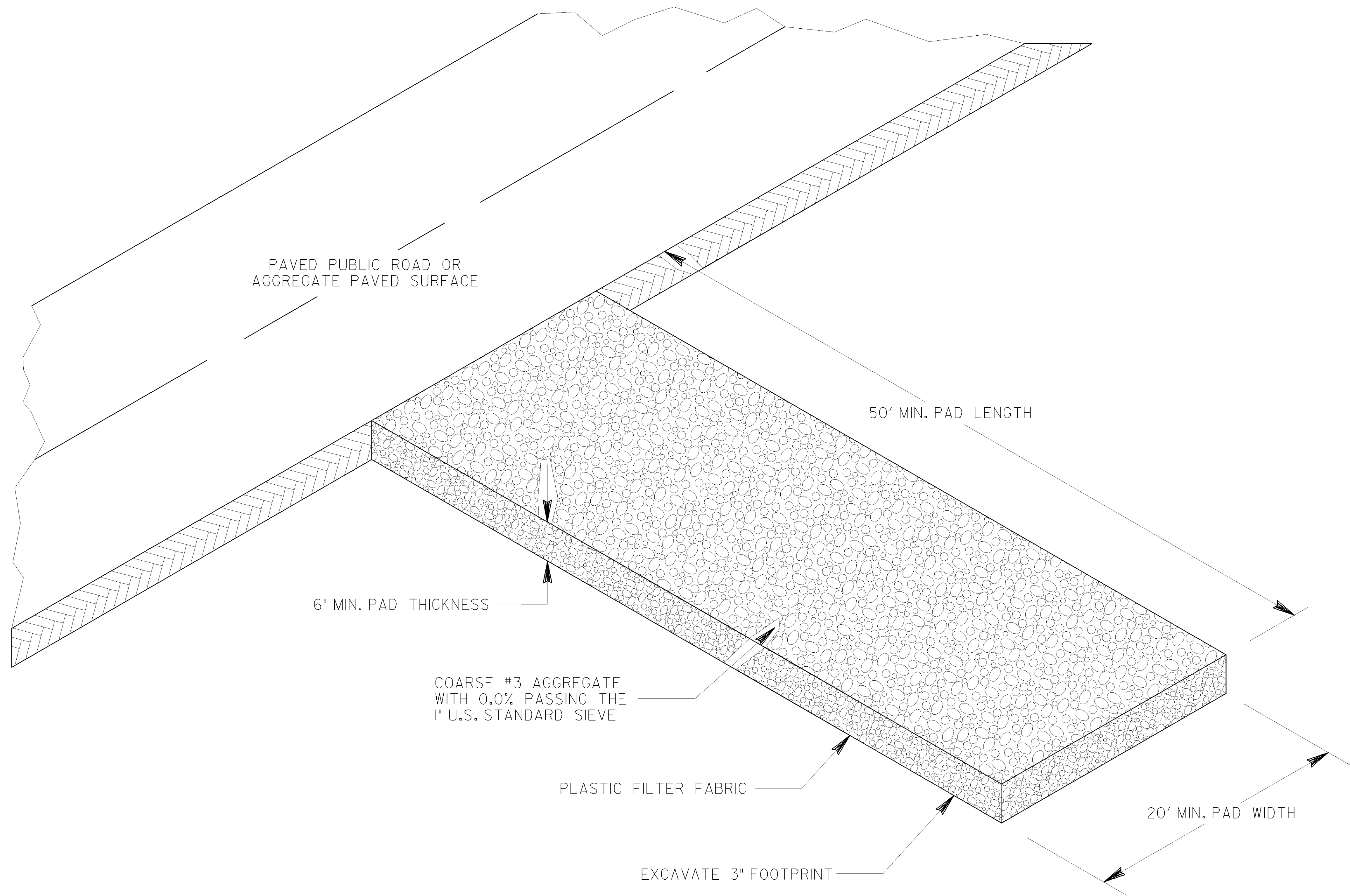


DITCH SECTION

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>	

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	WID 0208-1		



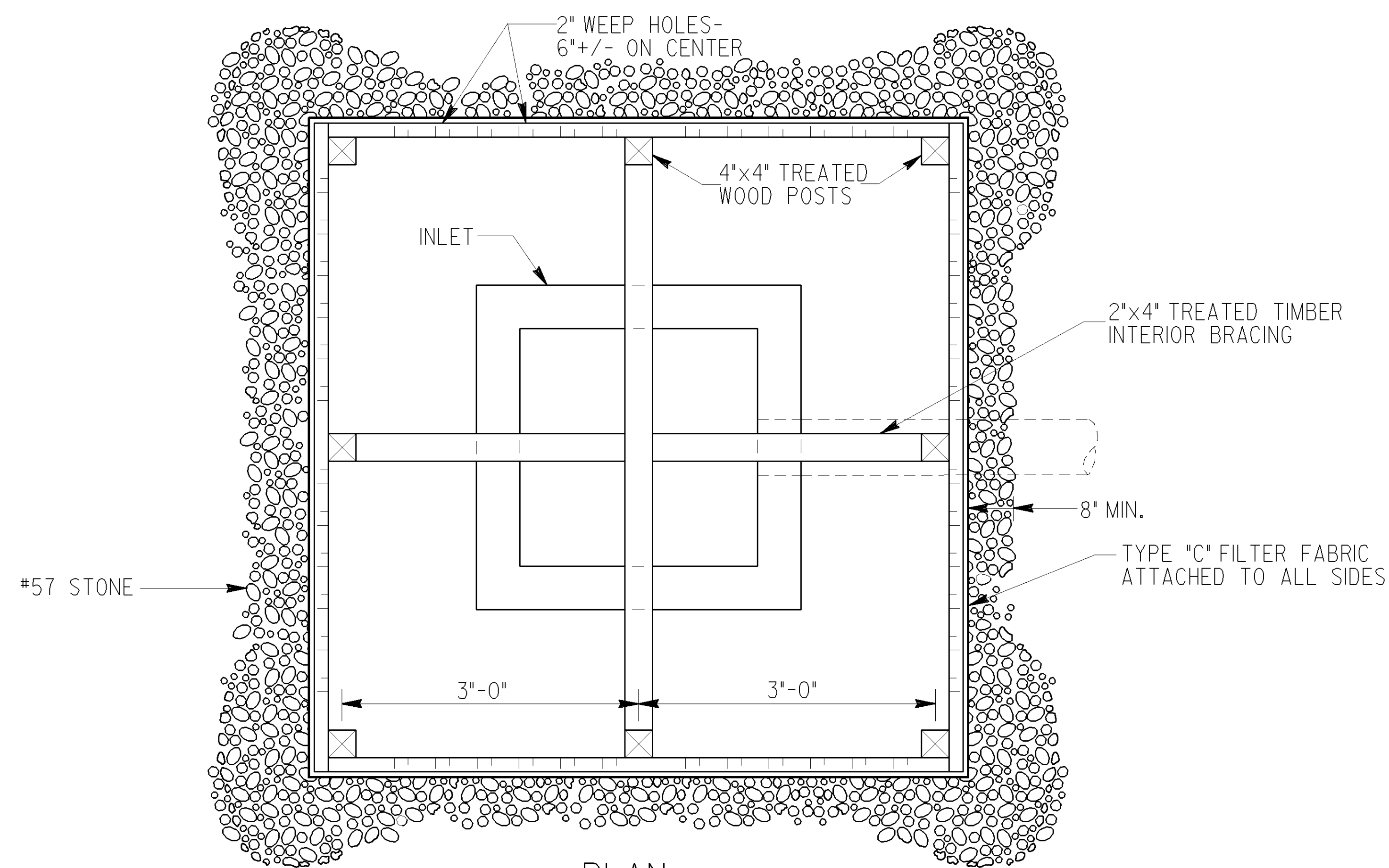
- NOTES:
- 1) STONE AGGREGATE SHALL BE KEPT LOOSE OR SCARIFIED WHEN AGGREGATE BECOMES CONSOLIDATED.
 - 2) CONSTRUCTION EXITS ARE NOT REQUIRED FOR DIRT PUBLIC ROADS.

MAINTENANCE

THE EXIT SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH COARSE #3 AGGREGATE, AS CONDITIONS DEMAND, AND REPAIR AND/OR CLEANOUT OF ANY STRUCTURES TO TRAP SEDIMENT. ALL MUD AND DEBRIS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES OR SITE ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.

PAY ITEM: 163-0300__CONSTRUCTION EXIT__EACH

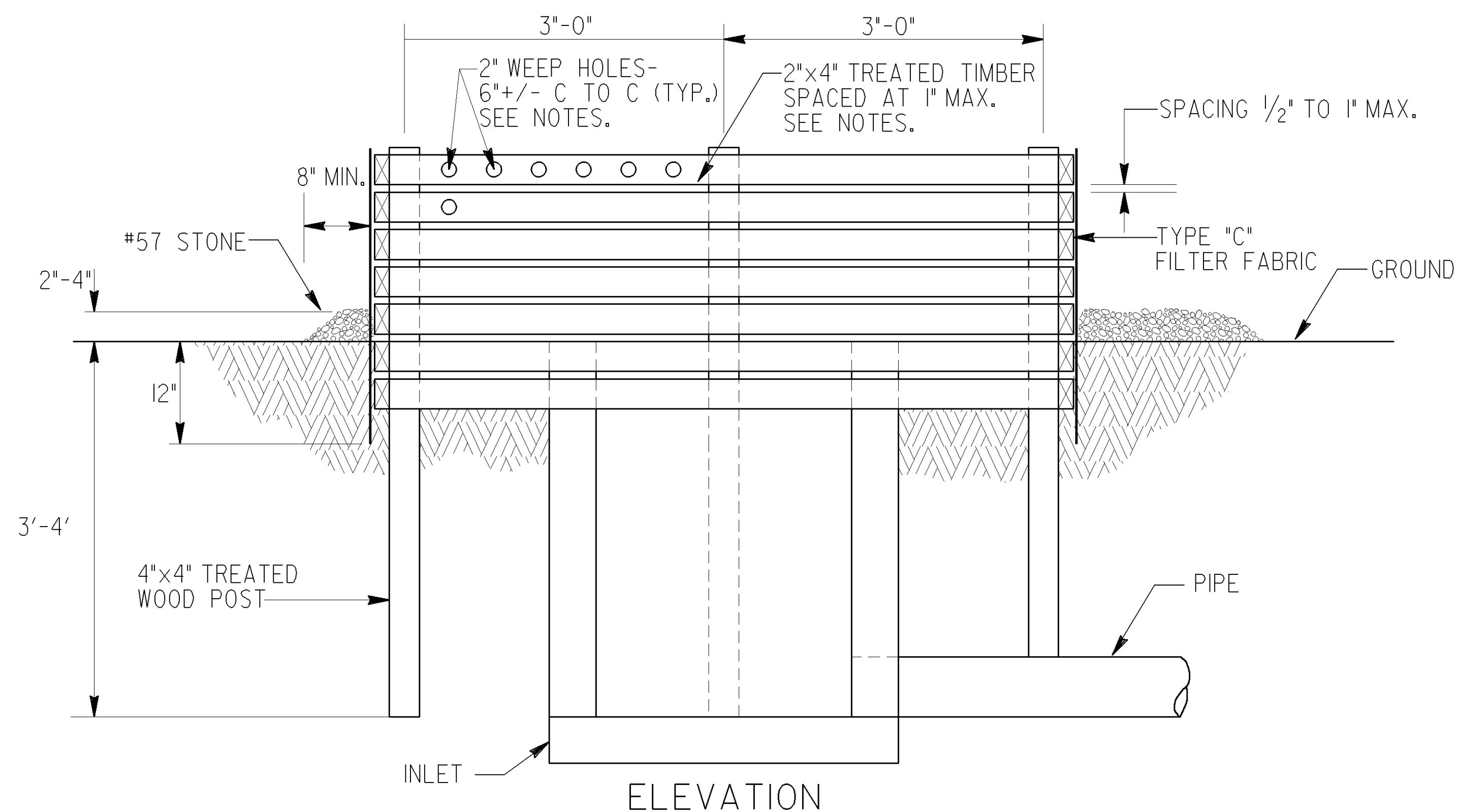
		1-19-11	DATE	DEPARTMENT OF TRANSPORTATION	
				STATE OF GEORGIA	
		REV. CONSTR. EXIT LABELS	REVISION	CONSTRUCTION DETAILS	
				CONSTRUCTION EXIT	
				NO SCALE	FEBRUARY 2001
TPC	BY			NUMBER	
				D-41	



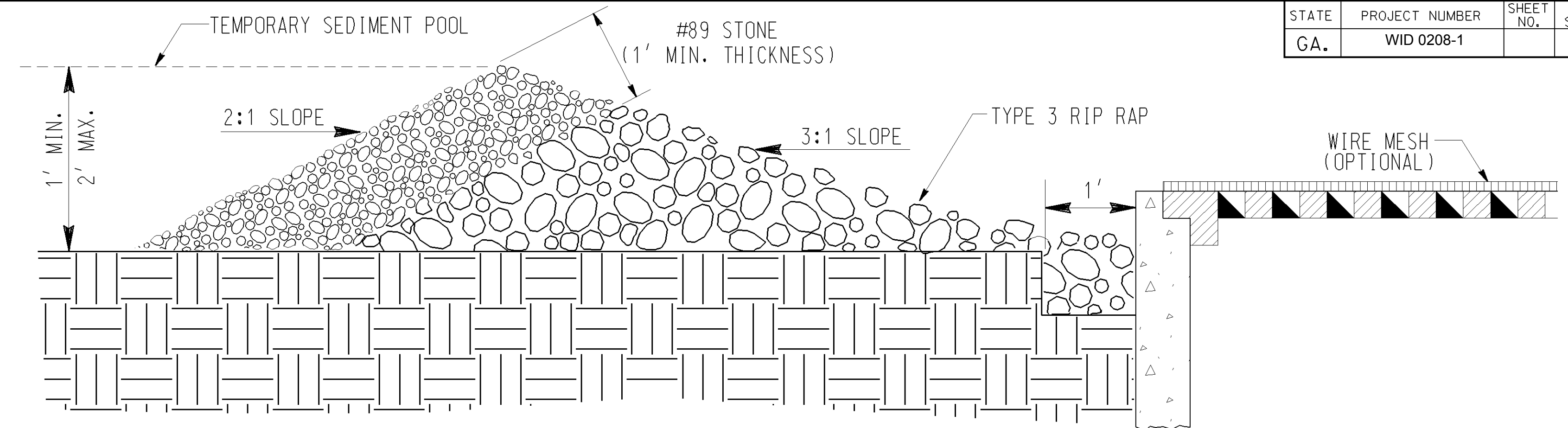
NOTES:

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.

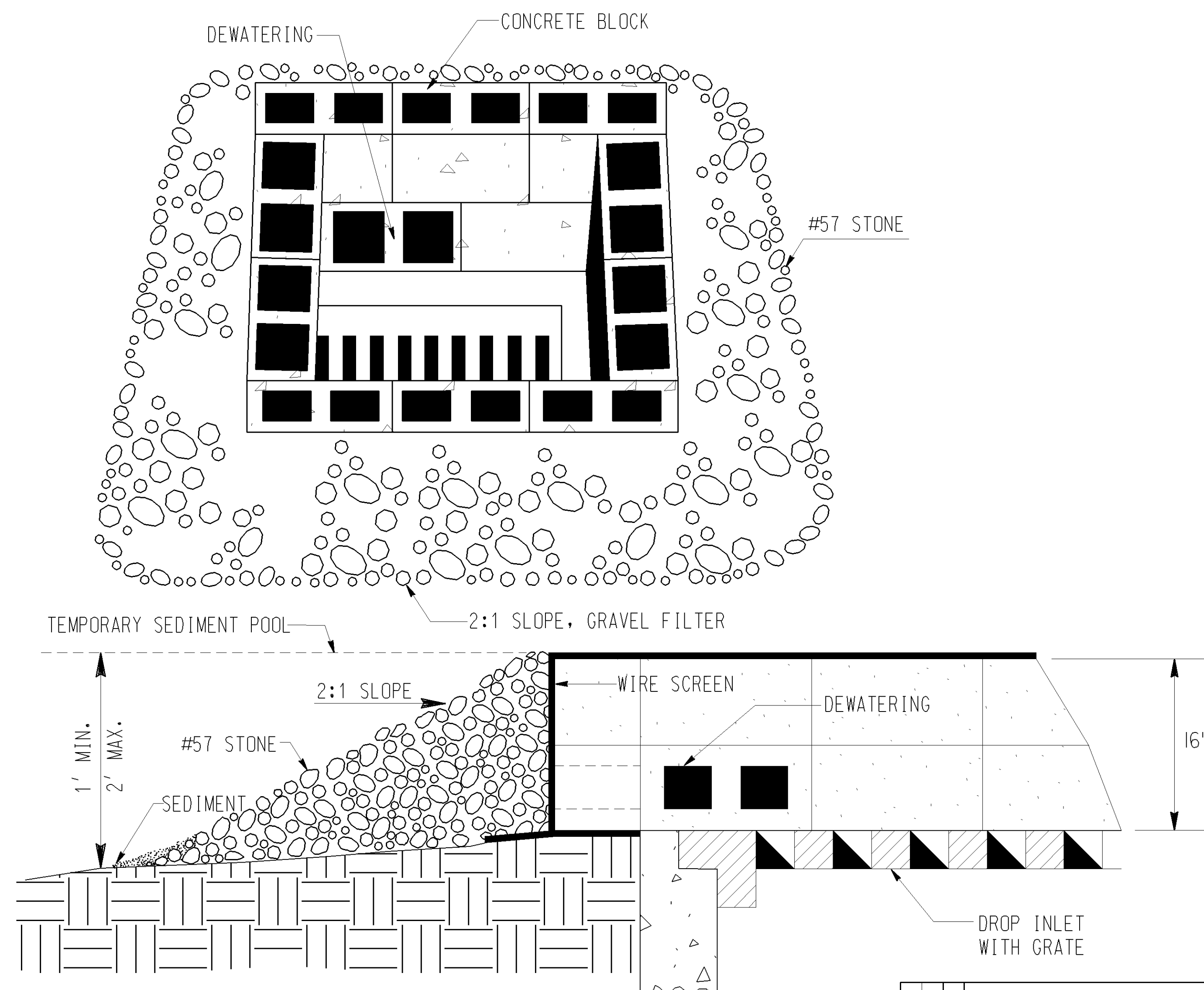
GRAVEL SHALL BE PLACED OUTSIDE THE BOX, ALL AROUND THE INLET, TO A DEPTH OF 2 TO 4 INCHES. THE ENTIRE BOX SHALL BE WRAPPED IN TYPE "C" FILTER FABRIC THAT SHALL BE ENTRENCHED 12 INCHES AND BACKFILLED.



BAFFLE BOX (Sd2-B)



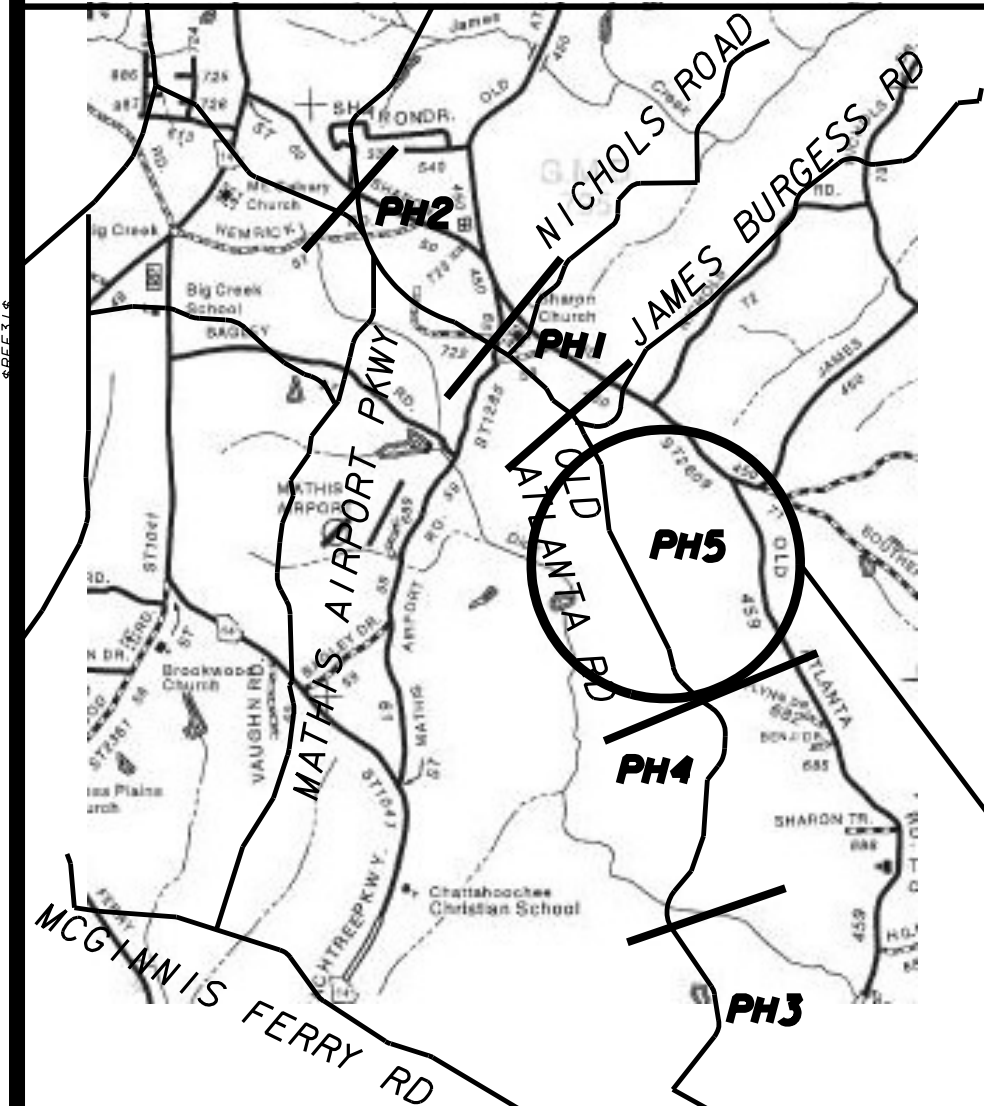
GRAVEL DROP INLET PROTECTION
(GRAVEL DONUT) Sd2-G



BLOCK & GRAVEL DROP
INLET PROTECTION
(Sd2-Bg)

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

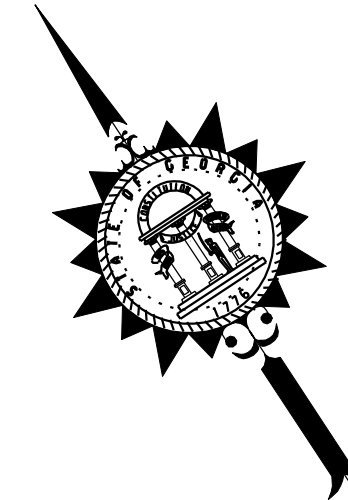
	DATE	DEPARTMENT OF TRANSPORTATION	
		STATE OF GEORGIA	
	REVISION	CONSTRUCTION DETAIL	
		INLET SEDIMENT TRAPS	
		BAFFLE BOX Sd2-B	
		BLOCK AND GRAVEL DROP INLET PROTECTION Sd2-Bg	
		GRAVEL DROP INLET PROTECTION Sd2-G	
		NO SCALE	MAY 2008
	BY		NUMBER
			D-42



VICINITY MAP

FORSYTH COUNTY
ENGINEERING DEPARTMENT

RIGHT OF WAY OF PROPOSED
OLD ATLANTA ROAD
WIDENING FROM SHARON ROAD TO MCGINNIS FERRY ROAD
PHASE 5
FORSYTH COUNTY
PROJECTS WID 0208-1



CONVENTIONAL SIGNS	
STATE OR COUNTY LINE.....	---
CITY LIMIT LINE.....	---
LAND LOT LINE.....	---
PROPERTY LINE.....	---
SURVEY OR BASE LINE.....	---
RIGHT OF WAY LINE.....	---
EXISTING.....	---
REQUIRED.....	---
LIMIT OF ACCESS.....	---
REQD R/W & LIMIT OF ACCESS.....	---
R/W MARKERS.....	---
TELEPHONE LINE.....	---
POWER POLES.....	---
TELEPHONE OR TELEGRAPH POLES.....	---

THIS PROJECT IS IN ENGLISH UNITS
NOTE: THE CO-ORDINATES LISTED ARE GEORGIA WEST ZONE
GRID CO-ORDINATES BASED ON THE GA. STATE PLANE
CO-ORDINATE SYSTEM OF GA WEST.
HORIZONTAL DATUM : NAD 83/94
VERTICAL DATUM : NAVD 1988

MIDPOINT COORDINATE
STATION 221+50.00
N 1488055.20
E 2306519.53

BEGIN REQ'D R/W
ACQUISITION
STA 184+02.89

BEGIN PROJECT
PN WID 0208-1
STA. 180+00.00
N 1491903.02
E 2305242.15

DESIGN DATA FOR OLD ATLANTA ROAD
TRAFFIC A.D.T.: 20,900 (2012)
TRAFFIC A.D.T.: 35,850 (2032)
TRAFFIC D.H.V.: 3,755 (2032)
DIRECTIONAL DIST.: 55/45
% TRUCKS: 7%
SPEED DESIGN : 45 MPH

OLD ATLANTA ROAD
STA. 183+56.23 =
JAMES BURGESS ROAD
STA. 10+00.00

OLD ATLANTA ROAD
STA. 183+62.19
FIRE STATION ACCESS ROAD
20+00.00

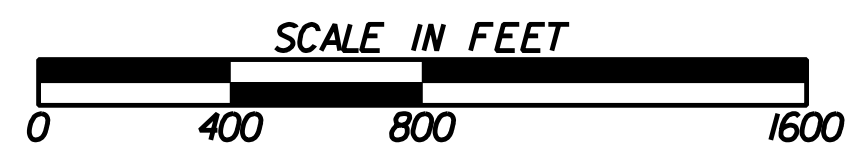
END PROJECT
PN WID 0208-1 (PHASE 5)
STA 263+00.00

END REQ'D R/W
ACQUISITION
STA 259+66.00
PHASE 5
TIE TO EXIST PHASE 4
STA 260+00.00

THIS PROJECT IS LOCATED 100% IN FORSYTH COUNTY
AND CONGRESSIONAL DISTRICT 09.
PROJECT DESIGNATION : EXEMPT
FUNCTIONAL CLASSIFICATION : MINOR ARTERIAL STREET

LENGTH OF RIGHT OF WAY PROJECT	COUNTY NO. 117
	MILES
NET LENGTH OF RIGHT OF WAY	1.432
NET LENGTH OF BRIDGES	0.000
NET LENGTH OF EXCEPTIONS	0.000
GROSS LENGTH OF RIGHT OF WAY	1.432

LAND DISTRICT: 2nd SECTION: 1st
LAND LOTS: 1071, 1083, 1084, 1140, 1148, 1149 & 1207
G.M.D. 795

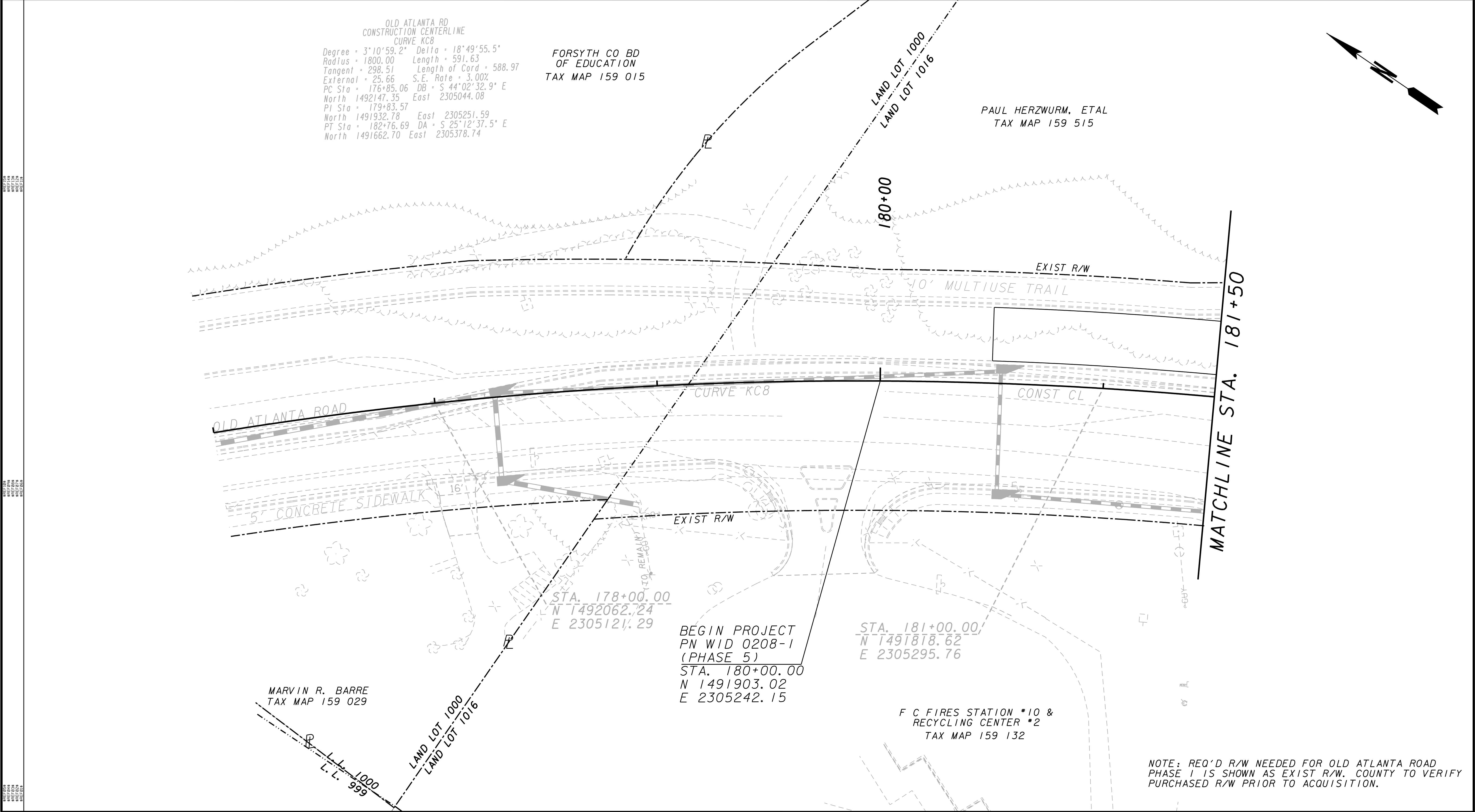


GRESHAM
SMITH AND
PARTNERS
GRESHAM, SMITH & PARTNERS
2325 LAKEVIEW PARKWAY
SUITE 300
ALPHARETTA, GA 30004
PHONE No. (770) 754-0755

PLANS PREPARED BY
SARAH E. WORACHEK, PE

FORSYTH COUNTY DEPARTMENT OF TRANSPORTATION	DATE
PLANS COMPLETED DATE: FEBRUARY 27, 2015	
REVISIONS:	

PROJECT NUMBER: WID 0208-1
FORSYTH COUNTY



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---

=====

---C---F---

BEGIN LIMIT OF ACCESS.....BLA

END LIMIT OF ACCESS.....ELA

LIMIT OF ACCESS

REQ'D R/W & LIMIT OF ACCESS

SCALE IN FEET

GRESHAM
SMITH AND
PARTNERS

DATE	REVISIONS	DATE	REVISIONS

FORSYTH COUNTY
DEPARTMENT OF TRANSPORTATION

RIGHT OF WAY MAP

PROJECT NO: WID 0208-1

COUNTY: FORSYTH

LAND LOT NO'S: 1071, 1083, 1084, 1140, 1148, 1149 & 1207

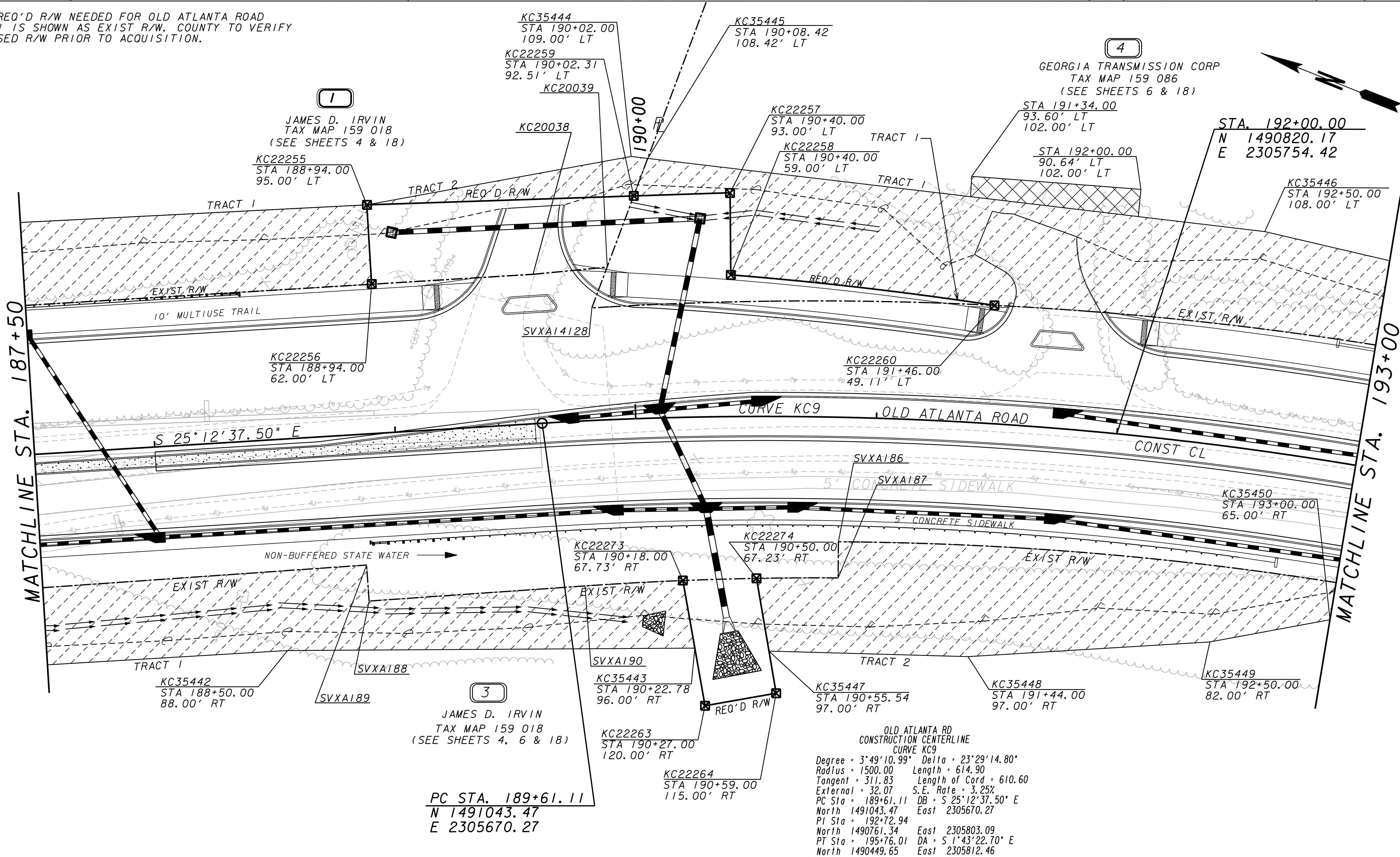
LAND DISTRICT: 2nd SECTION: 1st

GMD: 795

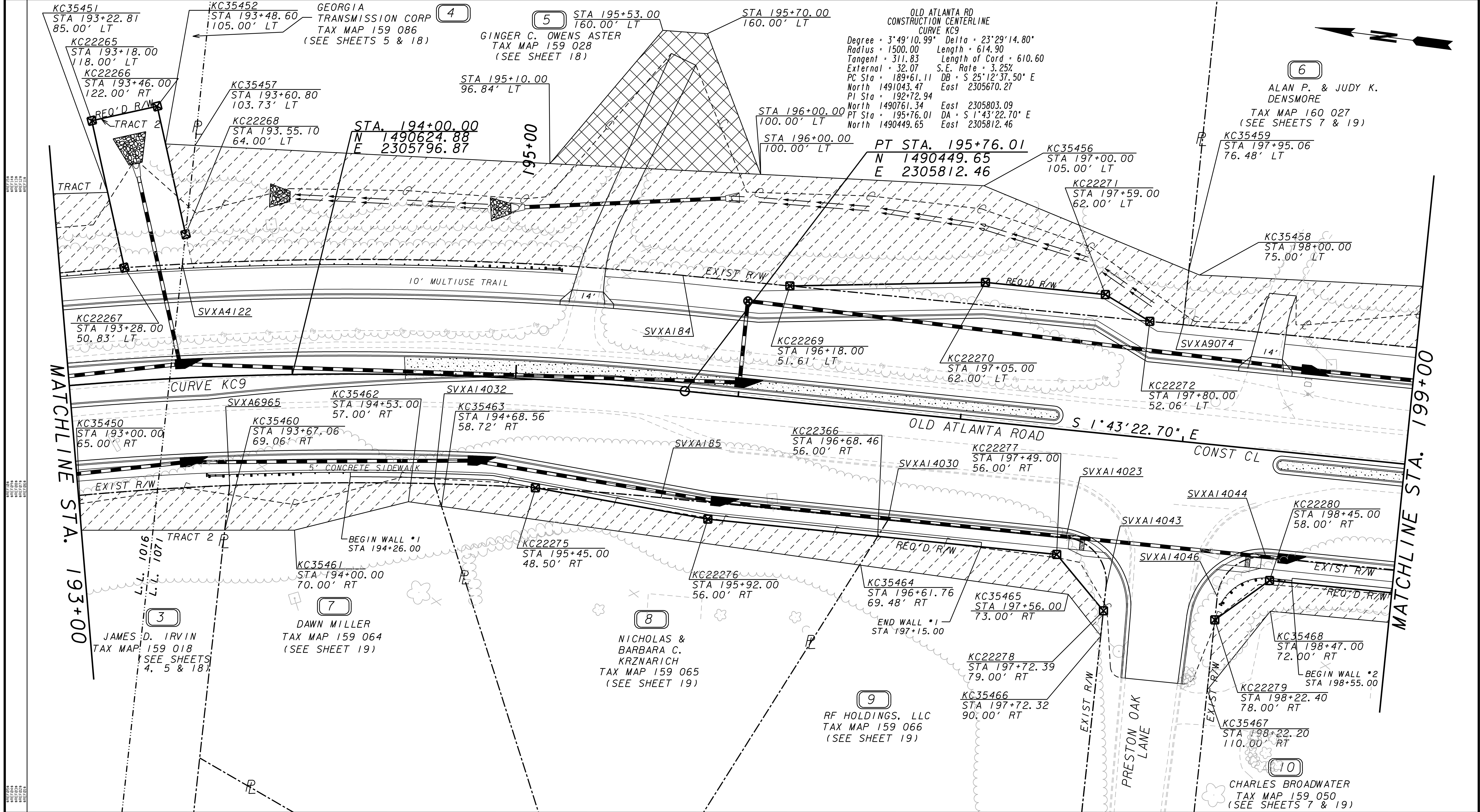
DATE 02-27-15

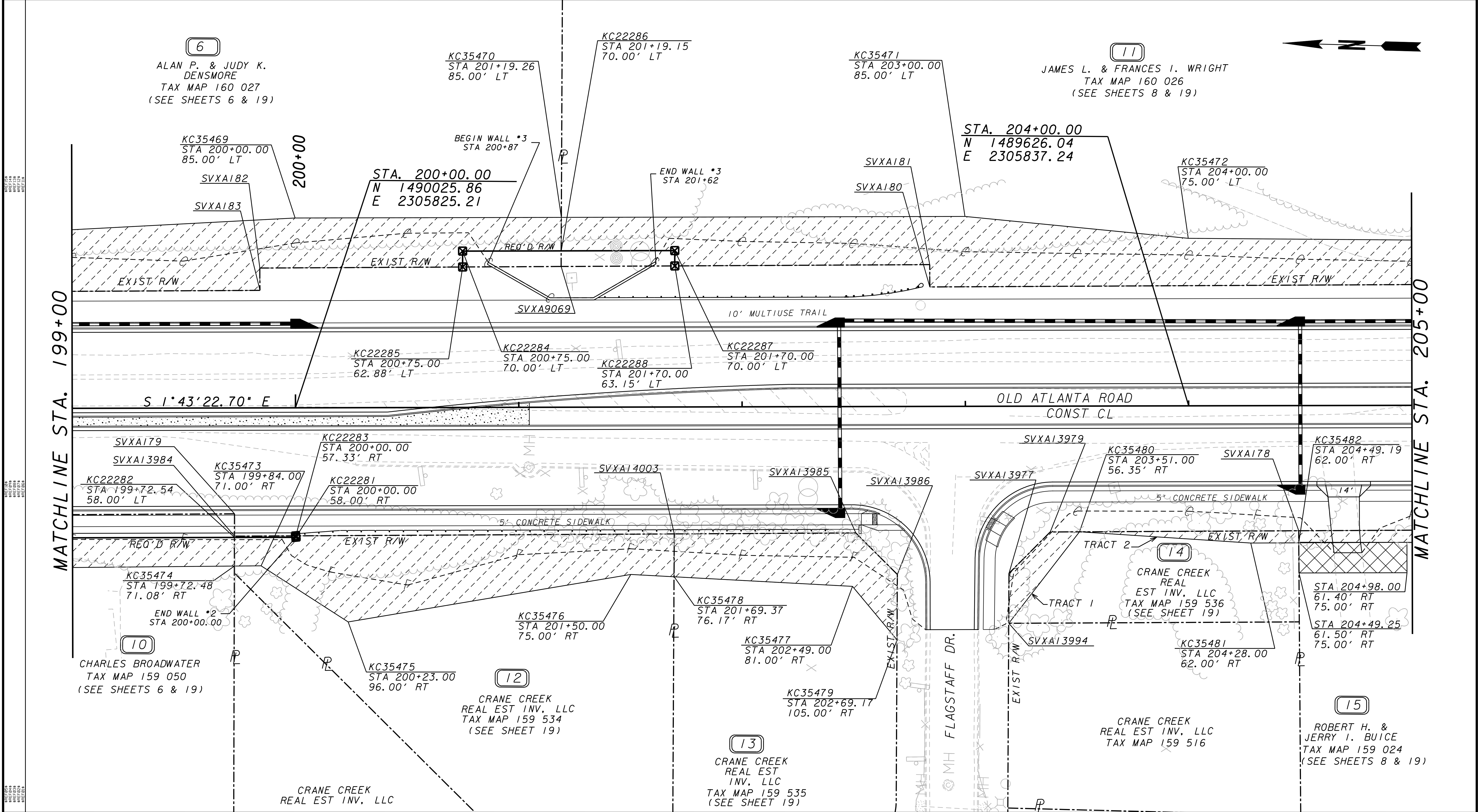
SH 03 OF 25

NOTE: REQ'D R/W NEEDED FOR OLD ATLANTA ROAD
PHASE 1 IS SHOWN AS EXIST R/W. COUNTY TO VERIFY
PURCHASED R/W PRIOR TO ACQUISITION.



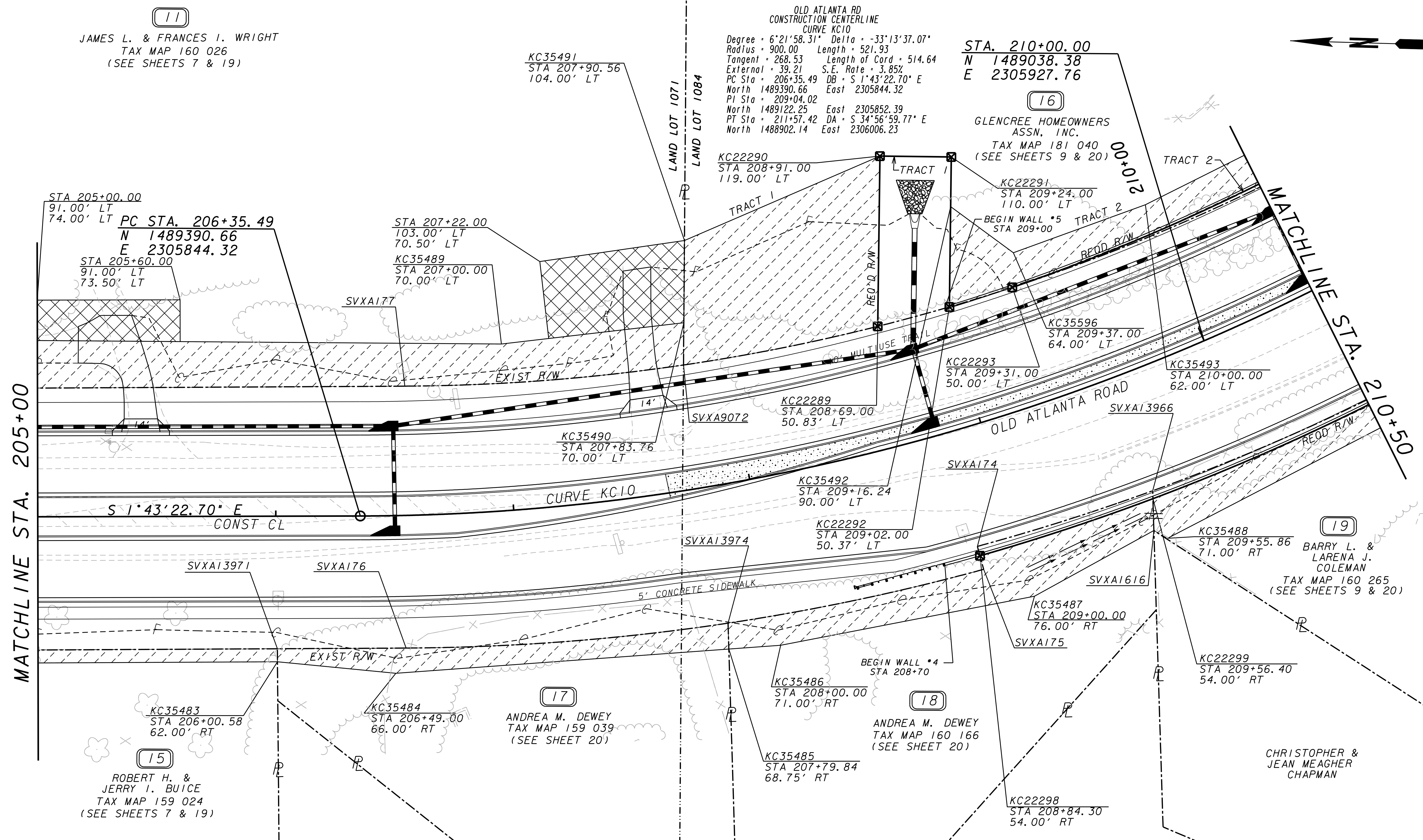
PROPERTY AND EXISTING R/W LINE REQUIRED R/W LINE CONSTRUCTION LIMITS EASEMENT FOR CONSTR & MAINTENANCE OF SLOPES EASEMENT FOR CONSTR OF SLOPES EASEMENT FOR CONSTR OF DRIVES	<div><div>---E---</div><div>---</div><div>---C---F---</div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div></div>	BEGIN LIMIT OF ACCESS.....BLA END LIMIT OF ACCESS.....ELA LIMIT OF ACCESS REQ'D R/W & LIMIT OF ACCESS	<div><div></div><div>GS&P</div><div>GRESHAM SMITH AND PARTNERS</div></div>	DATE	REVISIONS	DATE	REVISIONS	FORSYTH COUNTY DEPARTMENT OF TRANSPORTATION RIGHT OF WAY MAP PROJECT NO: WID 0208-1 COUNTY: FORSYTH LAND LOT NO'S: 1071, 1083, 1084, 1140, 1148, 1149 & 1207 LAND DISTRICT: 2nd SECTION: 1st GMD: 795 DATE 02-27-15





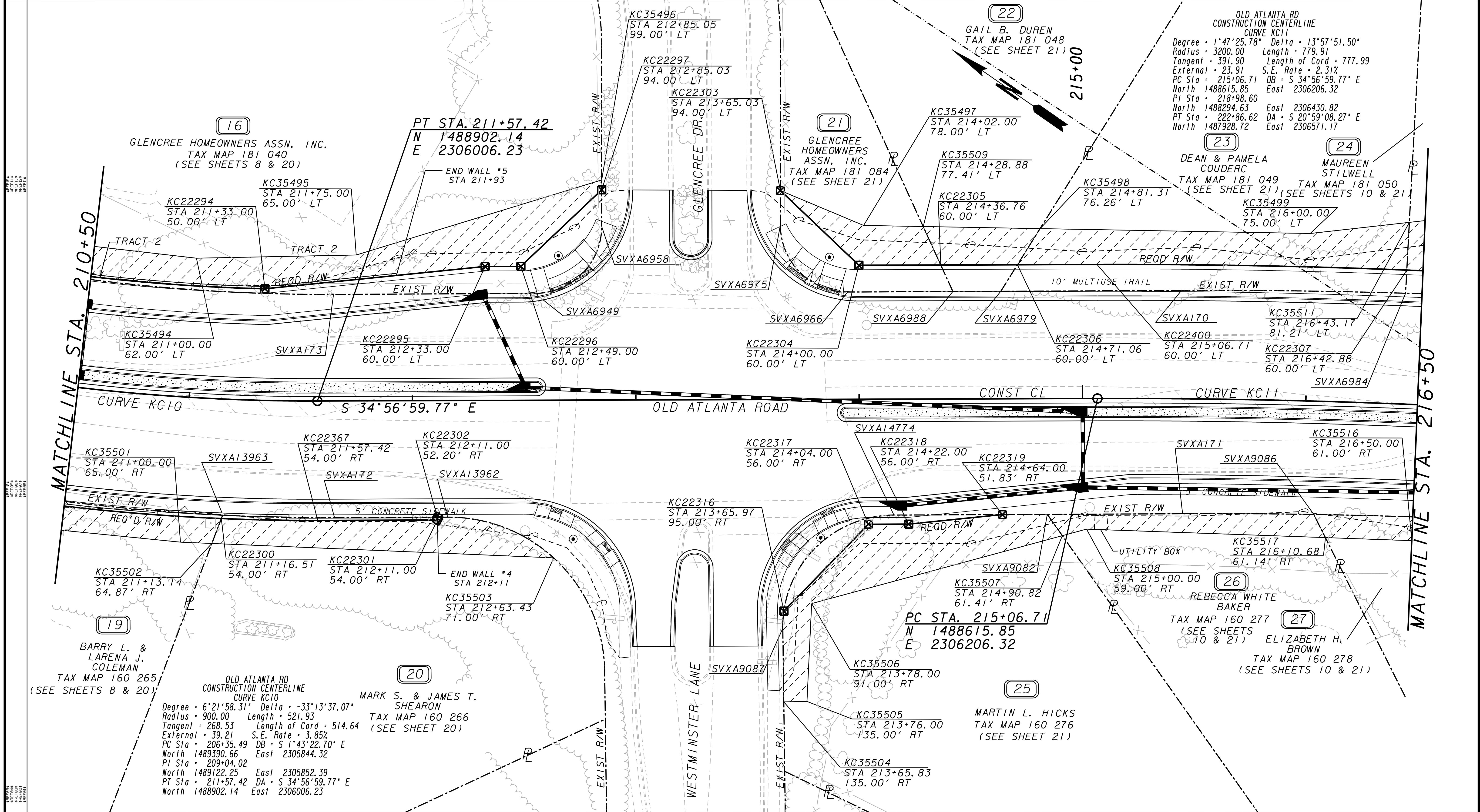
PROPERTY AND EXISTING R/W LINE REQUIRED R/W LINE CONSTRUCTION LIMITS EASEMENT FOR CONSTR & MAINTENANCE OF SLOPES EASEMENT FOR CONSTR OF SLOPES EASEMENT FOR CONSTR OF DRIVES		BEGIN LIMIT OF ACCESS.....BLA END LIMIT OF ACCESS.....ELA LIMIT OF ACCESS REQ'D R/W & LIMIT OF ACCESS			GRESHAM SMITH AND PARTNERS	DATE	REVISIONS	DATE	REVISIONS

FORSYTH COUNTY DEPARTMENT OF TRANSPORTATION	
RIGHT OF WAY MAP	
PROJECT NO.: WID 0208-1	
COUNTY: FORSYTH	
LAND LOT NO'S: 1071, 1083, 1084, 1140, 1148, 1149 & 1207	
LAND DISTRICT: 2nd SECTION: 1st	
GMD: 795	
DATE 02-27-15	SH 07 OF 25



PROPERTY AND EXISTING R/W LINE ---P--- REQUIRED R/W LINE ---R--- CONSTRUCTION LIMITS ---C---F--- EASEMENT FOR CONSTR [Hatched Box] & MAINTENANCE OF SLOPES [Hatched Box] EASEMENT FOR CONSTR OF SLOPES [Hatched Box] EASEMENT FOR CONSTR OF DRIVES [Hatched Box]	BEGIN LIMIT OF ACCESS.....BLA END LIMIT OF ACCESS.....ELA LIMIT OF ACCESS ---O--- REQ'D R/W & LIMIT OF ACCESS ---H--- SCALE IN FEET 0 20 40 80	 GRESHAM SMITH AND PARTNERS	DATE	REVISIONS	DATE	REVISIONS

FORSYTH COUNTY DEPARTMENT OF TRANSPORTATION	
RIGHT OF WAY MAP	
PROJECT NO.: WID 0208-1	
COUNTY: FORSYTH	
LAND LOT NO'S: 1071, 1083, 1084, 1140, 1148, 1149 & 1207	
LAND DISTRICT: 2nd SECTION: 1st	
GMD: 795	
DATE 02-27-15	SH 08 OF 25



PROPERTY AND EXISTING R/W LINE

REQUIRED R/W LINE

CONSTRUCTION LIMITS

EASEMENT FOR CONSTR & MAINTENANCE OF SLOPES

EASEMENT FOR CONSTR OF SLOPES

EASEMENT FOR CONSTR OF DRIVES

BEGIN LIMIT OF ACCESS.....BLA

END LIMIT OF ACCESS.....ELA

LIMIT OF ACCESS

REQ'D R/W & LIMIT OF ACCESS

SCALE IN FEET

0 20 40 80

GRESHAM SMITH AND PARTNERS

DATE

REVISIONS

DATE

REVISIONS

FORSYTH COUNTY DEPARTMENT OF TRANSPORTATION

RIGHT OF WAY MAP

PROJECT NO.: WID 0208-1

COUNTY: FORSYTH

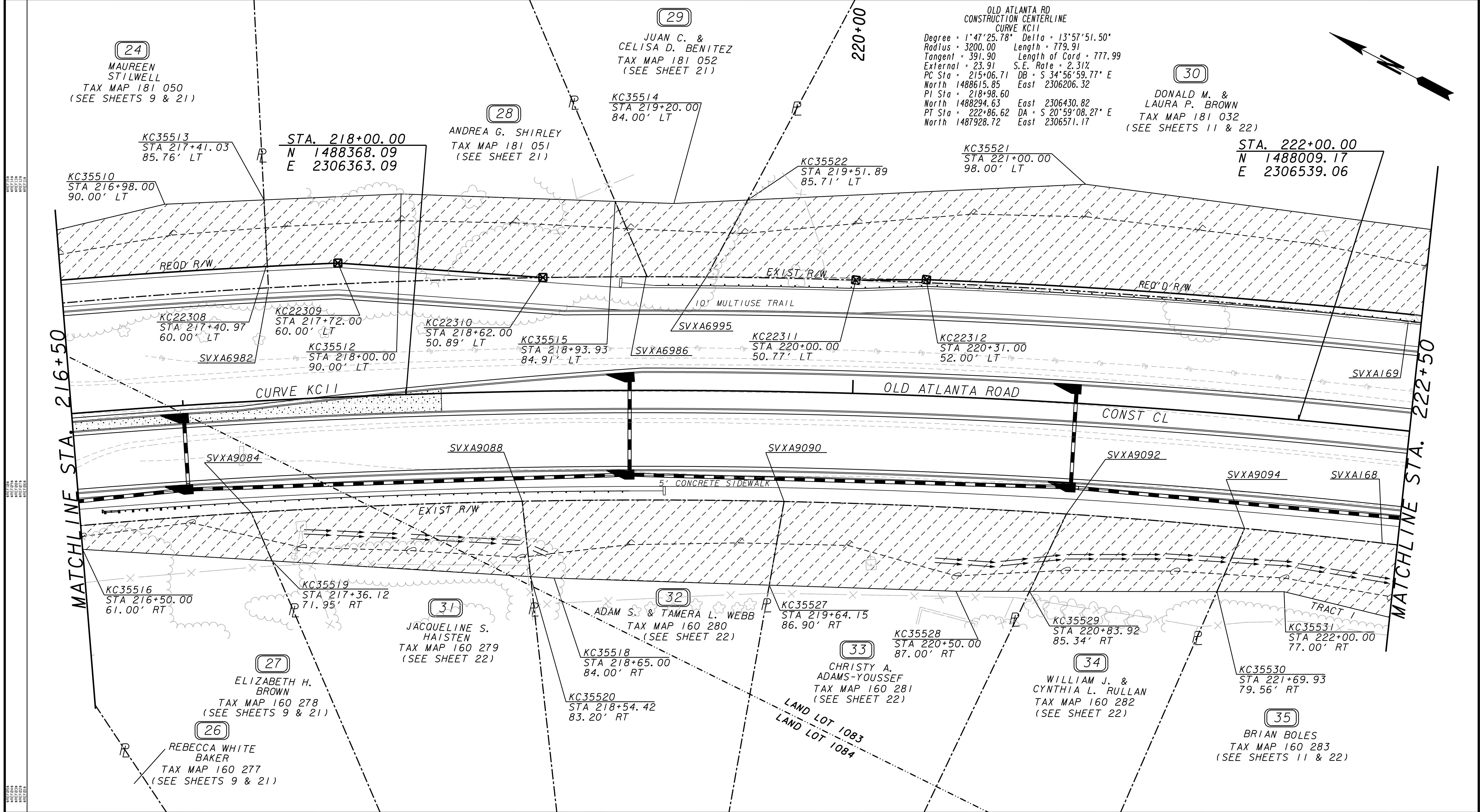
LAND LOT NO'S: 1071, 1083, 1084, 1140, 1148, 1149 & 1207

LAND DISTRICT: 2nd SECTION: 1st

GMD: 795

DATE 02-27-15

SH 09 OF 25



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---

---C---F---

BEGIN LIMIT OF ACCESS.....BLA

END LIMIT OF ACCESS.....ELA

LIMIT OF ACCESS

REQ'D R/W & LIMIT OF ACCESS

SCALE IN FEET

0 20 40 80

GRESHAM
SMITH AND
PARTNERS

DATE	REVISIONS	DATE	REVISIONS

FORSYTH COUNTY
DEPARTMENT OF TRANSPORTATION

RIGHT OF WAY MAP

PROJECT NO.: WID 0208-1

COUNTY: FORSYTH

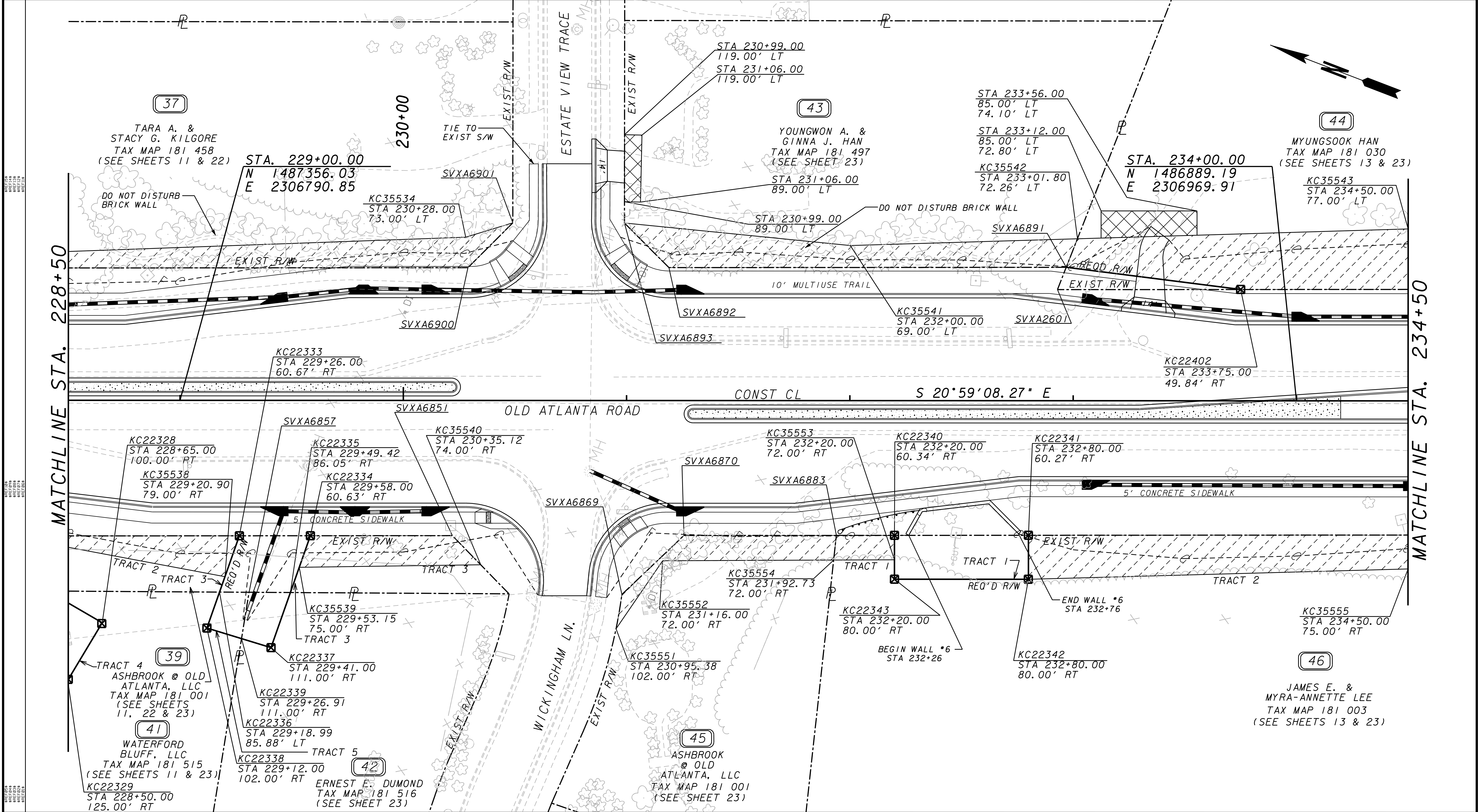
LAND LOT NO'S: 1071, 1083, 1084, 1140, 1148, 1149 & 1207

LAND DISTRICT: 2nd SECTION: 1st

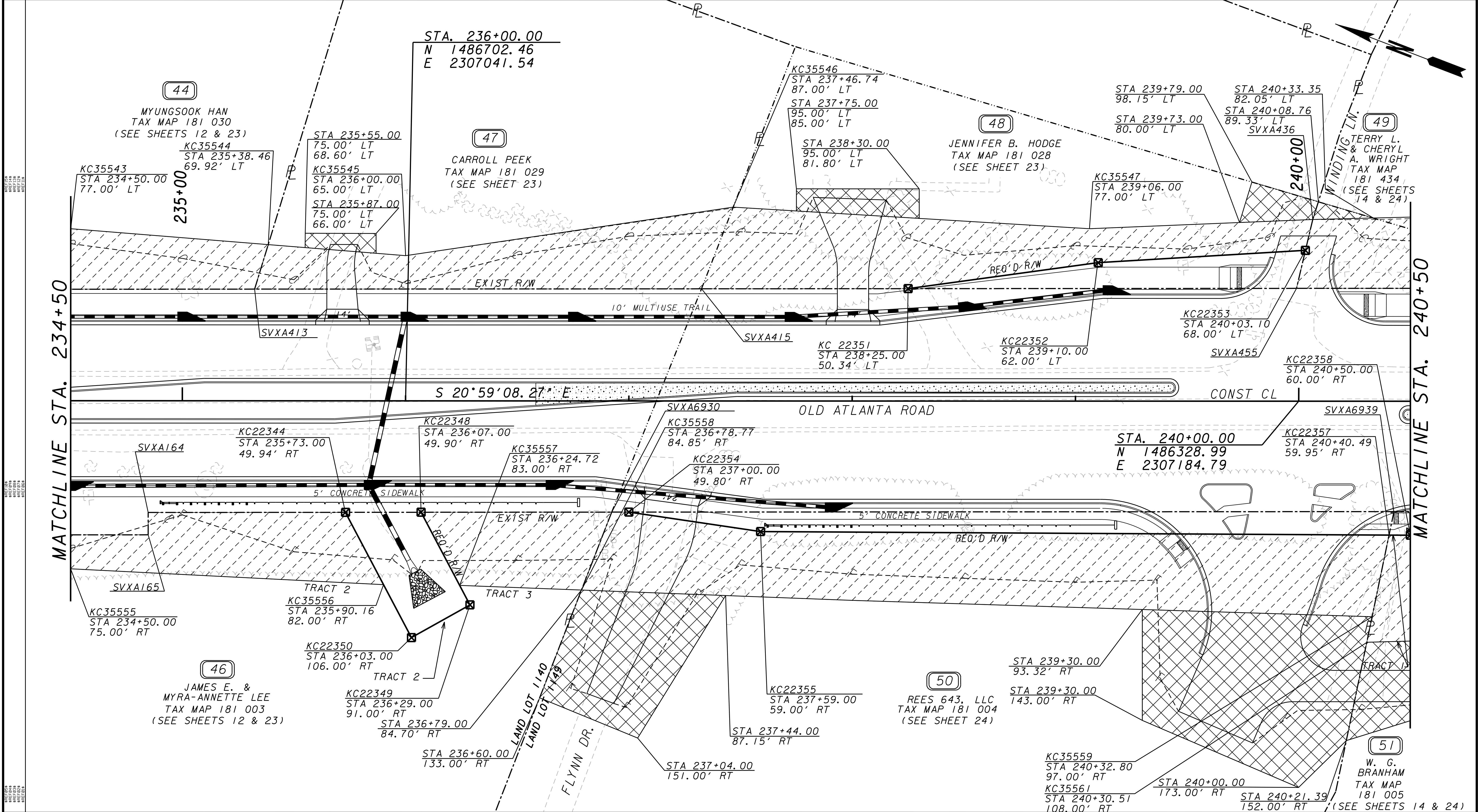
GMD: 795

DATE 02-27-15

SH 10 OF 25



PROPERTY AND EXISTING R/W LINE REQUIRED R/W LINE CONSTRUCTION LIMITS EASEMENT FOR CONSTR & MAINTENANCE OF SLOPES EASEMENT FOR CONSTR OF SLOPES EASEMENT FOR CONSTR OF DRIVES		BEGIN LIMIT OF ACCESS.....BLA END LIMIT OF ACCESS.....ELA LIMIT OF ACCESS REQ'D R/W & LIMIT OF ACCESS		 GRESHAM SMITH AND PARTNERS		DATE	REVISIONS	DATE	REVISIONS	FORSYTH COUNTY DEPARTMENT OF TRANSPORTATION RIGHT OF WAY MAP PROJECT NO: WID 0208-1 COUNTY: FORSYTH LAND LOT NO'S: 1071, 1083, 1084, 1140, 1148, 1149 & 1207 LAND DISTRICT: 2nd SECTION: 1st GMD: 795 DATE 02-27-15		SH 12 OF 25
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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---

---C---F---

BEGIN LIMIT OF ACCESS.....BLA

END LIMIT OF ACCESS.....ELA

LIMIT OF ACCESS

REQ'D R/W & LIMIT OF ACCESS

SCALE IN FEET

0 20 40 80

GRESHAM
SMITH AND
PARTNERS

DATE	REVISIONS	DATE	REVISIONS

FORSYTH COUNTY
DEPARTMENT OF TRANSPORTATION

RIGHT OF WAY MAP

PROJECT NO.: WID 0208-1

COUNTY: FORSYTH

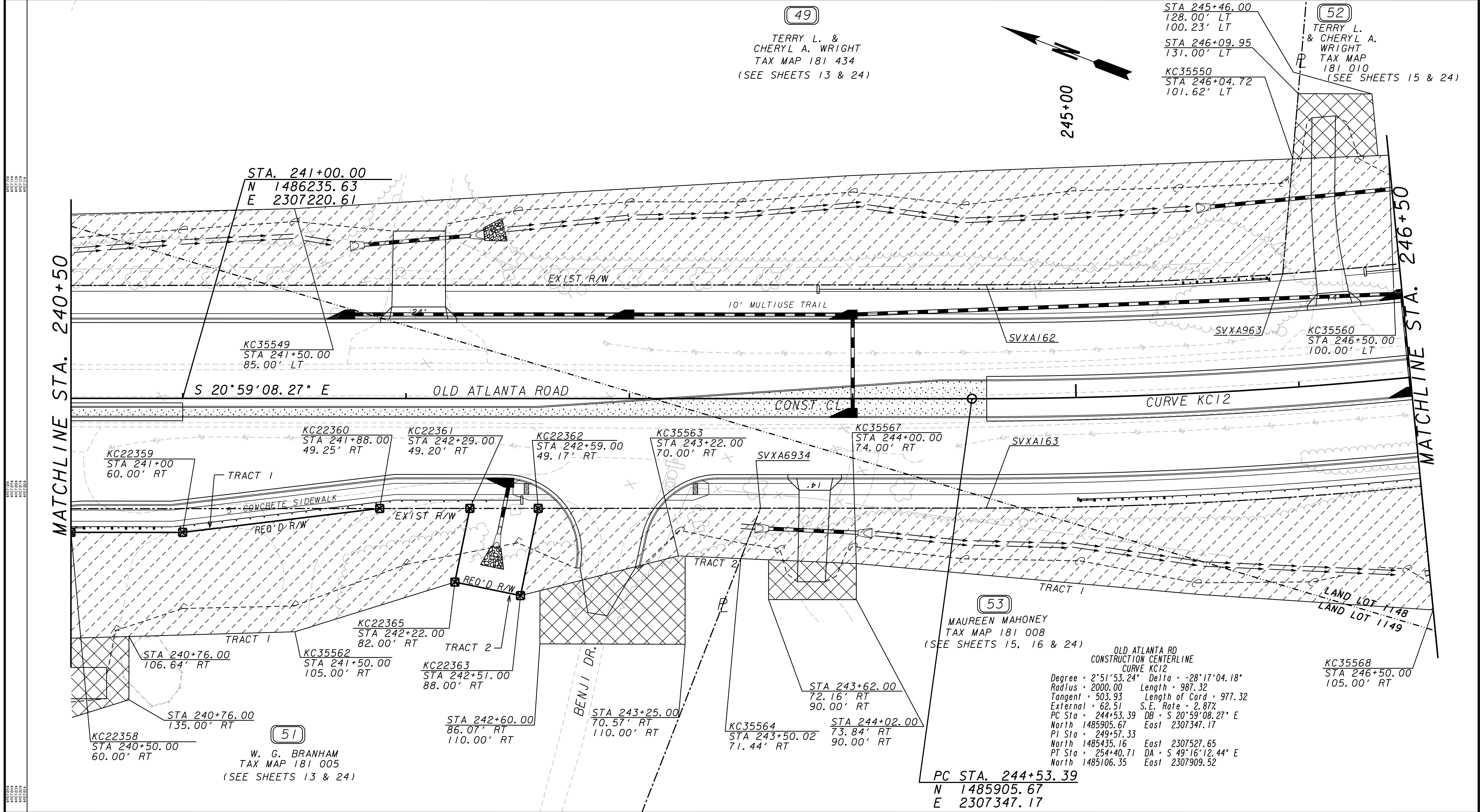
LAND LOT NO'S: 1071, 1083, 1084, 1140, 1148, 1149 & 1207

LAND DISTRICT: 2nd SECTION: 1st

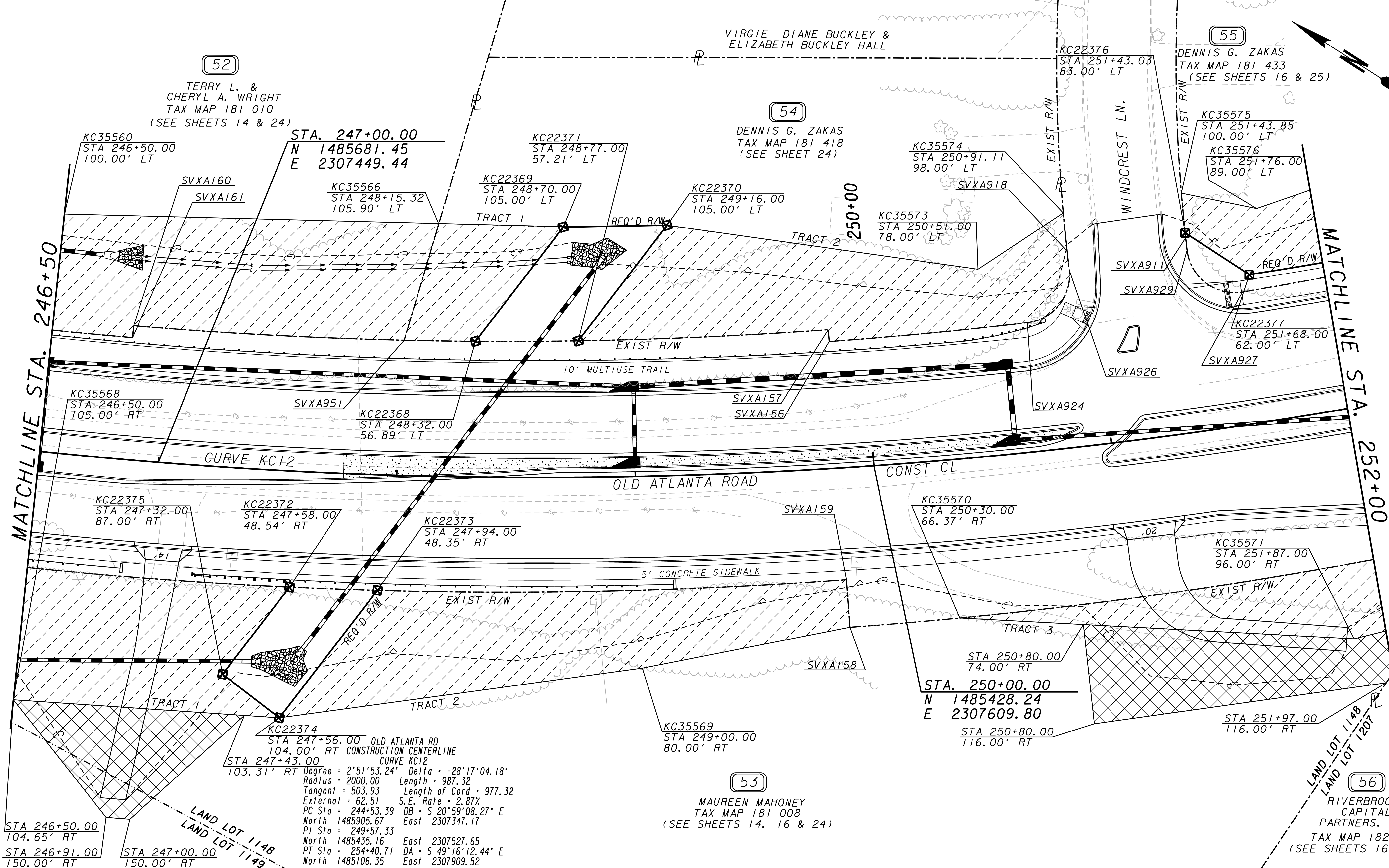
GMD: 795

DATE 02-27-15

SH 13 OF 25



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--- ---F--- ---G--- ---H--- ---I--- ---J--- ---K---	BEGIN LIMIT OF ACCESS.....BLA END LIMIT OF ACCESS.....ELA LIMIT OF ACCESS REQ'D R/W & LIMIT OF ACCESS	 G R E S H A M S M I T H A N D P A R T N E R S	DATE REVISIONS		DATE REVISIONS		FORSYTH COUNTY DEPARTMENT OF TRANSPORTATION RIGHT OF WAY MAP PROJECT NO: WID 0208-1 COUNTY: FORSYTH LAND LOT NO'S: 1071, 1083, 1084, 1140, 1148, 1149 & 1207 LAND DISTRICT: 2nd SECTION: 1st GMD: 795 DATE 02-27-15 SH 14 OF 25
				SCALE IN FEET 0 20 40 80				



PROPERTY AND EXISTING R/W LINE

REQUIRED R/W LINE

CONSTRUCTION LIMITS

EASEMENT FOR CONSTR

& MAINTENANCE OF SLOPES

EASEMENT FOR CONSTR OF SLOPES

EASEMENT FOR CONSTR OF DRIVES

BEGIN LIMIT OF ACCESS.....BLA

END LIMIT OF ACCESS.....ELA

LIMIT OF ACCESS

REQ'D R/W & LIMIT OF ACCESS

GRESHAM
SMITH AND
PARTNERS

DATE

REVISIONS

DATE

REVISIONS

FORSYTH COUNTY
DEPARTMENT OF TRANSPORTATION

RIGHT OF WAY MAP

PROJECT NO.: WID 0208-1

COUNTY: FORSYTH

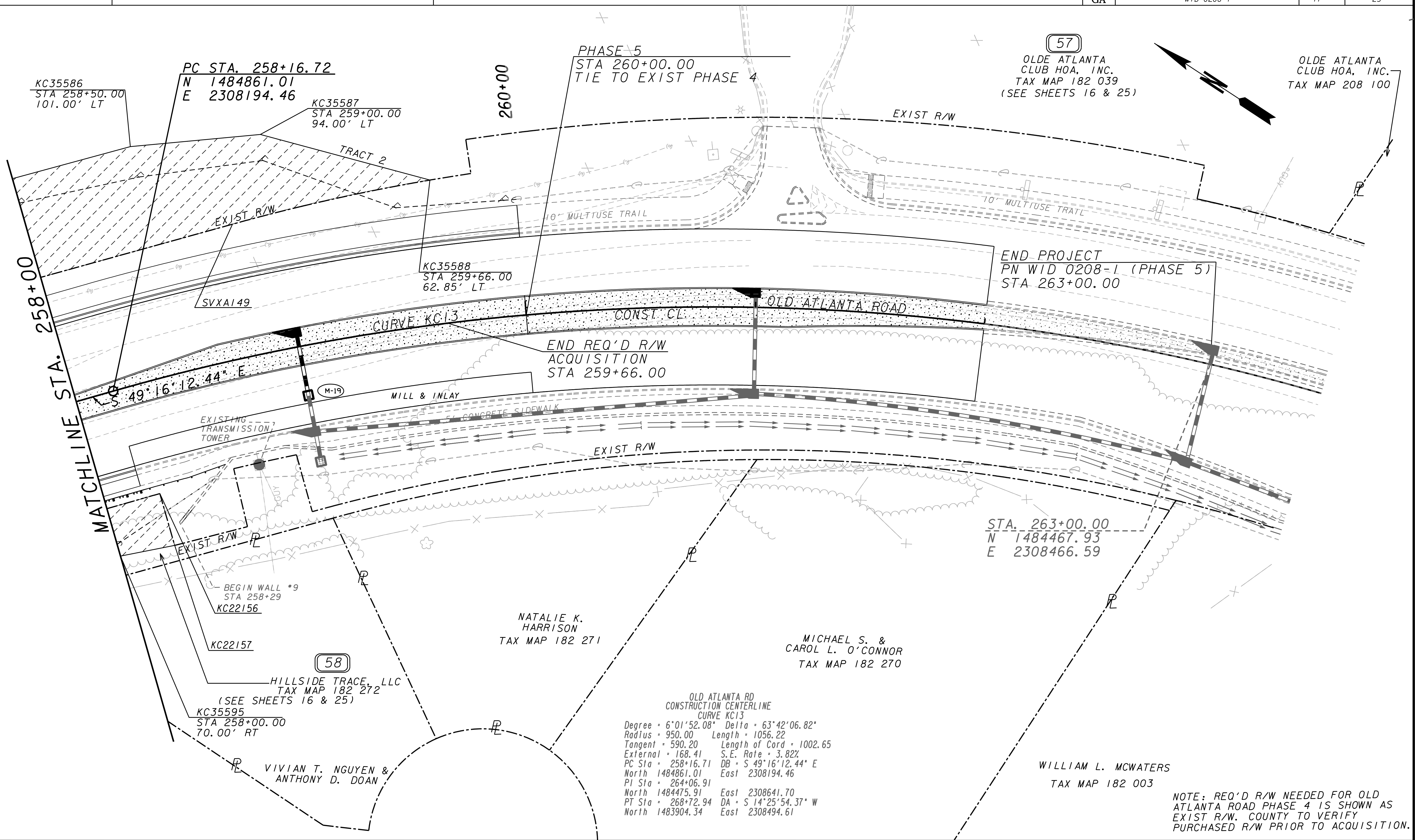
LAND LOT NO'S: 1071, 1083, 1084, 1140, 1148, 1149 & 1207

LAND DISTRICT: 2nd SECTION: 1st

GMD: 795

DATE 02-27-15

SH 15 OF 25



PROPERTY AND EXISTING R/W LINE REQUIRED R/W LINE CONSTRUCTION LIMITS EASEMENT FOR CONSTR & MAINTENANCE OF SLOPES EASEMENT FOR CONSTR OF SLOPES EASEMENT FOR CONSTR OF DRIVES		BEGIN LIMIT OF ACCESS.....BLA END LIMIT OF ACCESS.....ELA LIMIT OF ACCESS REQ'D R/W & LIMIT OF ACCESS		 GRESHAM SMITH AND PARTNERS	DATE REVISIONS		DATE REVISIONS		FORSYTH COUNTY DEPARTMENT OF TRANSPORTATION RIGHT OF WAY MAP PROJECT NO.: WID 0208-1 COUNTY: FORSYTH LAND LOT NO'S: 1071, 1083, 1084, 1140, 1148, 1149 & 1207 LAND DISTRICT: 2nd SECTION: 1st GMD: 795 DATE 02-27-15 SH 17 OF 25	

DATE\$\$\$

\$USER\$

\$SPRF\$

\$PENTABLE\$\$

\$DCN\$

GRWPLN

STATE

GA

PROJECT NUMBER

WID 0208-1

SHEET NO.

18

TOTAL SHEETS

25

PARCEL 1 REQ'D R/W KC5091

PNT OFFSET/ STATION/ ALIGNMENT

DIST BEARING

KC22256 62.00 L 188+94.00 OLD ATLANTA ROAD

33.00 N 64°47'22.5" E

KC22255 95.00 L 188+94.00 OLD ATLANTA ROAD

110.89 S 23°36'52.9" E

KC22259 92.51 L 190+02.31 OLD ATLANTA ROAD

33.06 S 88°46'55.4" W

KC20039 62.00 L 189+90.20 OLD ATLANTA ROAD

ARC LENGTH = 30.287

CHORD BEAR = N 24°39'17.4" W

LNTH CHORD = 30.287

RADIUS = 1562.000

DEGREE = 3° 40' 5''

KC20038 62.00 L 189+61.12 OLD ATLANTA ROAD

67.12 N 25°12'37.5" W

KC22256 62.00 L 188+94.00 OLD ATLANTA ROAD

REQD R/W = 3290.64 SF

REQD R/W = 0.076 ACRES

REMAINDER = +/- 10 ACRES

PARCEL 1 TRACT 1 REQ'D TEMP. EASM'T. KC6120T1

PNT OFFSET STATION ALIGNMENT

SVXA14125 92.66 L 184+02.89 OLD ATLANTA ROAD

KC35438 87.00 L 184+73.00 OLD ATLANTA ROAD

KC35439 98.00 L 186+50.00 OLD ATLANTA ROAD

KC22255 95.00 L 188+94.00 OLD ATLANTA ROAD

KC22256 62.00 L 188+94.00 OLD ATLANTA ROAD

SVXA14126 41.90 L 184+55.04 OLD ATLANTA ROAD

SVXA14125 92.66 L 184+02.89 OLD ATLANTA ROAD

REQD EASMT AREA = 19904.95 SF

PARCEL 1 TRACT 2 REQ'D TEMP. EASM'T. KC6120T2

PNT OFFSET STATION ALIGNMENT

KC22255 95.00 L 188+94.00 OLD ATLANTA ROAD

KC35444 109.00 L 190+02.00 OLD ATLANTA ROAD

KC35445 108.42 L 190+08.42 OLD ATLANTA ROAD

KC22259 92.51 L 190+02.31 OLD ATLANTA ROAD

KC22255 95.00 L 188+94.00 OLD ATLANTA ROAD

REQD EASMT AREA = 970.82 SF

REQ'D TEMP EASM'T PARCEL 1 TRACT 1 = 19904.95 SF

REQ'D TEMP EASM'T PARCEL 1 TRACT 2 = 970.82 SF

TOTAL REQ'D TEMP EASM'T PARCEL 1 TRACTS 1 & 2 = 20875.77 SF

PARCEL 2 REQ'D TEMP. EASM'T. KC6121

PNT OFFSET STATION ALIGNMENT

KC20044 58.30 R 184+33.00 OLD ATLANTA ROAD

SVXA14119 57.12 R 185+67.12 OLD ATLANTA ROAD

KC35441 88.00 R 185+67.50 OLD ATLANTA ROAD

KC35440 88.00 R 185+50.00 OLD ATLANTA ROAD

KC20044 58.30 R 184+33.00 OLD ATLANTA ROAD

REQD EASMT AREA = 2331.09 SF

REQ'D TEMP EASM'T PARCEL 1 TRACT 1 = 19904.95 SF

REQ'D TEMP EASM'T PARCEL 1 TRACT 2 = 970.82 SF

TOTAL REQ'D TEMP EASM'T PARCEL 1 TRACTS 1 & 2 = 20875.77 SF

PARCEL 3 REQ'D R/W KC5094

PNT OFFSET/ STATION/ ALIGNMENT

DIST BEARING

KC22273 67.73 R 190+18.00 OLD ATLANTA ROAD

ARC LENGTH = 30.565

CHORD BEAR = S 23°22'20.2" E

LNTH CHORD = 30.564

RADIUS = 1367.451

DEGREE = 4° 11' 23''

KC22274 67.23 R 190+50.00 OLD ATLANTA ROAD

48.51 S 58°19'18.6" W

KC22264 115.00 R 190+59.00 OLD ATLANTA ROAD

29.91 N 31°42'14.7" W

KC22263 120.00 R 190+27.00 OLD ATLANTA ROAD

52.94 N 57°57'53.5" E

KC22273 67.73 R 190+18.00 OLD ATLANTA ROAD

REQD R/W = 1527.19 SF

REQD R/W = 0.035 ACRES

REMAINDER = +/- 10 ACRES

PARCEL 3 TRACT 1 REQ'D TEMP. EASM'T. KC6122T1

PNT OFFSET STATION ALIGNMENT

SVXA14119 57.12 R 185+67.12 OLD ATLANTA ROAD

SVXA189 54.31 R 188+84.77 OLD ATLANTA ROAD

SVXA188 69.31 R 188+84.90 OLD ATLANTA ROAD

SVXA190 68.45 R 189+75.41 OLD ATLANTA ROAD

ARC LENGTH = 40.667

CHORD BEAR = S 24°51'52.5" E

LNTH CHORD = 40.665

RADIUS = 1367.451

DEGREE = 4° 11' 23''

KC22273 67.73 R 190+18.00 OLD ATLANTA ROAD

KC35443 96.00 R 190+22.78 OLD ATLANTA ROAD

KC35442 88.00 R 188+50.00 OLD ATLANTA ROAD

KC35441 88.00 R 185+67.50 OLD ATLANTA ROAD

SVXA14119 57.12 R 185+67.12 OLD ATLANTA ROAD

REQD EASMT AREA = 13551.61 SF

PARCEL 3 TRACT 2 REQ'D TEMP. EASM'T. KC6122T2

PNT OFFSET STATION ALIGNMENT

KC22274 67.23 R 190+50.00 OLD ATLANTA ROAD

ARC LENGTH = 33.917

CHORD BEAR = S 22°01'17.1" E

LNTH CHORD = 33.916

RADIUS = 1367.451

DEGREE = 4° 11' 23''

SVXA187 66.71 R 190+85.50 OLD ATLANTA ROAD

SVXA186 51.71 R 190+85.27 OLD ATLANTA ROAD

ARC LENGTH = 275.389

CHORD BEAR = S 15°36'14.8" E

LNTH CHORD = 274.934

RADIUS = 1382.451

DEGREE = 4° 8' 40''

SVXA6965 48.93 R 193+70.16 OLD ATLANTA ROAD

KC35460 69.06 R 193+67.06 OLD ATLANTA ROAD

KC35450 65.00 R 193+00.00 OLD ATLANTA ROAD

KC35449 82.00 R 192+50.00 OLD ATLANTA ROAD

KC35448 97.00 R 191+44.00 OLD ATLANTA ROAD

KC35447 97.00 R 190+55.54 OLD ATLANTA ROAD

KC22274 67.23 R 190+50.00 OLD ATLANTA ROAD

REQD EASMT AREA = 9879.57 SF

REQ'D TEMP EASM'T PARCEL 3 TRACT 1 = 13551.61 SF

REQ'D TEMP EASM'T PARCEL 3 TRACT 2 = 9879.57 SF

TOTAL REQ'D TEMP EASM'T PARCEL 3 TRACTS 1 & 2 = 23431.18 SF

PARCEL 4 TRACT 1 REQ'D R/W KC5092T1

PNT OFFSET/ STATION/ ALIGNMENT

DIST BEARING

KC22259 92.51 L 190+02.31 OLD ATLANTA ROAD

40.02 S 23°36'52.9" E

KC22257 93.00 L 190+40.00 OLD ATLANTA ROAD

34.00 S 67°48'10.1" W

KC22258 59.00 L 190+40.00 OLD ATLANTA ROAD

ARC LENGTH = 110.264

CHORD BEAR = S 15°01'37.5" E

LNTH CHORD = 110.241

RADIUS = 1557.348

DEGREE = 3° 40' 44''

KC22260 49.11 L 191+46.00 OLD ATLANTA ROAD

ARC LENGTH = 167.261

CHORD BEAR = N 22°03'45.1" W

LNTH CHORD = 167.173

RADIUS = 1482.451

DEGREE = 3° 51' 53''

SVXA14128 46.71 L 189+83.94 OLD ATLANTA ROAD

16.61 N 88°46'55.4" E

KC20039 62.00 L 189+90.20 OLD ATLANTA ROAD

33.06 N 88°46'55.4" E

KC22259 92.51 L 190+02.31 OLD ATLANTA ROAD

REQD R/W = 2838.93 SF

REQD R/W = 0.065 ACRES

PARCEL 4 TRACT 2 REQ'D R/W KC5092T2

PNT OFFSET/ STATION/ ALIGNMENT

DIST BEARING

KC22267 50.83 L 193+28.00 OLD ATLANTA ROAD

68.00 N 69°40'34.5" E

KC22265 118.00 L 193+18.00 OLD ATLANTA ROAD

30.50 S 18°34'42.4" E

KC22266 122.00 L 193+46.00 OLD ATLANTA ROAD

58.80 S 70°12'17.6" W

KC22268 64.00 L 193+55.10 OLD ATLANTA ROAD

13.17 S 88°34'00.4" W

SVXA14122 50.98 L 193+53.17 OLD ATLANTA ROAD

ARC LENGTH = 26.022

CHORD BEAR = N 11°03'29.4" W

LNTH CHORD = 26.022

RADIUS = 1482.451

DEGREE = 3° 51' 53''

KC22267 50.83 L 193+28.00 OLD ATLANTA ROAD

REQD R/W = 2082.71 SF

REQD R/W = 0.048 ACRES

REQ'D R/W PARCEL 4 TRACT 1 = 0.065 AC

REQ'D R/W PARCEL 4 TRACT 2 = 0.048 AC

TOTAL REQ'D R/W PARCEL 4 TRACTS 1 & 2 = 0.113 AC

REMAINDER = +/- 4.0 ACRES

PARCEL 4 TRACT 2 REQ'D TEMP. EASM'T. KC6123T2

PNT OFFSET STATION ALIGNMENT

KC35452 105.00 L 193+48.60 OLD ATLANTA ROAD

KC35457 103.73 L 193+60.80 OLD ATLANTA ROAD

KC22268 64.00 L 193+55.10 OLD ATLANTA ROAD

KC35452 105.00 L 193+48.60 OLD ATLANTA ROAD

REQD EASMT AREA = 263.08 SF

REQ'D TEMP EASM'T PARCEL 4 TRACT 1 = 15708.58 SF

REQ'D TEMP EASM'T PARCEL 4 TRACT 2 = 263.08 SF

TOTAL REQ'D TEMP EASM'T PARCEL 4 TRACTS 1 & 2 = 15971.66 SF

PARCEL 4

DRIVEWAYS = 1

PARCEL 5 REQ'D R/W KC5093

PNT OFFSET/ STATION/ ALIGNMENT

DIST BEARING

KC22269 51.61 L 196+18.00 OLD ATLANTA ROAD

87.62 S 8°32'11.3" E

KC22270 62.00 L 197+05.00 OLD ATLANTA ROAD

54.00 S 1°43'22.7" E

KC22271 62.00 L 197+59.00 OLD ATLANTA ROAD

23.23 S 23°36'39.3" W

KC22272 52.06 L 197+80.00 OLD ATLANTA ROAD

162.00 N 1°52'59.6" W

KC22269 51.61 L 196+18.00 OLD ATLANTA ROAD

REQD R/W = 1090.71 SF

REQD R/W = 0.025 ACRES

REMAINDER = +/- 4.3 ACRES

PARCEL 5 REQ'D TEMP. EASM'T. KC6124

PNT OFFSET STATION ALIGNMENT

KC35457 103.73 L 193+60.80 OLD ATLANTA ROAD

KC35456 105.00 L 197+00.00 OLD ATLANTA ROAD

KC35459 76.48 L 197+95.06 OLD ATLANTA ROAD

SVXA9074 52.10 L 197+94.98 OLD ATLANTA ROAD

KC22272 52.06 L 197+80.00 OLD ATLANTA ROAD

KC22271 62.00 L 197+59.00 OLD ATLANTA ROAD

KC22270 62.00 L 197+05.00 OLD ATLANTA ROAD

KC22269 51.61 L 196+18.00 OLD ATLANTA ROAD

SVXA184 51.48 L 195+70.12 OLD ATLANTA ROAD

ARC LENGTH = 224.379

CHORD BEAR = N 6°13'09.3" W

LNTH CHORD = 224.165

RADIUS = 1482.451

DEGREE = 3° 51' 53''

SVXA14122 50.98 L 193+53.17 OLD ATLANTA ROAD

KC22268 64.00 L 193+55.10 OLD ATLANTA ROAD

KC35457 103.73 L 193+60.80 OLD ATLANTA ROAD

REQD EASMT AREA = 19677.88 SF

PARCEL 5

DRIVEWAYS = 1

DATE\$\$\$

\$USER\$

\$SPRF\$

\$PENTABLE\$\$

\$DCN\$

GRWPLN

STATE

GA

PROJECT NUMBER

WID 0208-1

SHEET NO.

18

TOTAL SHEETS

25

PARCEL 1 REQ'D R/W KC5091

PNT OFFSET/ STATION/ ALIGNMENT

DIST BEARING

KC22256 62.00 L 188+94.00 OLD ATLANTA ROAD

33.00 N 64°47'22.5" E

KC22255 95.00 L 188+94.00 OLD ATLANTA ROAD

110.89 S 23°36'52.9" E

KC22259 92.51 L 190+02.31 OLD ATLANTA ROAD

33.06 S 88°46'55.4" W

KC20039 62.00 L 189+90.20 OLD ATLANTA ROAD

ARC LENGTH = 30.287

CHORD BEAR = N 24°39'17.4" W

LNTH CHORD = 30.287

RADIUS = 1562.000

DEGREE = 3° 40' 5''

KC20038 62.00 L 189+61.12 OLD ATLANTA ROAD

67.12 N 25°12'37.5" W

KC22256 62.00 L 188+94.00 OLD ATLANTA ROAD

REQD R/W = 3290.64 SF

REQD R/W = 0.076 ACRES

REMAINDER = +/- 10 ACRES

PARCEL 1 TRACT 1 REQ'D TEMP. EASM'T. KC6120T1

PNT OFFSET STATION ALIGNMENT

SVXA14125 92.66 L 184+02.89 OLD ATLANTA ROAD

KC35438 87.00 L 184+73.00 OLD ATLANTA ROAD

KC35439 98.00 L 186+50.00 OLD ATLANTA ROAD

KC22255 95.00 L 188+94.00 OLD ATLANTA ROAD

KC22256 62.00 L 188+94.00 OLD ATLANTA ROAD

SVXA14126 41.90 L 184+55.04 OLD ATLANTA ROAD

SVXA14125 92.66 L 184+02.89 OLD ATLANTA ROAD

REQD EASMT AREA = 19904.95 SF

PARCEL 1 TRACT 2 REQ'D TEMP. EASM'T. KC6120T2

PNT OFFSET STATION ALIGNMENT

KC22255 95.00 L 188+94.00 OLD ATLANTA ROAD

KC35444 109.00 L 190+02.00 OLD ATLANTA ROAD

KC35445 108.42 L 190+08.42 OLD ATLANTA ROAD

KC22259 92.51 L 190+02.31 OLD ATLANTA ROAD

KC22255 95.00 L 188+94.00 OLD ATLANTA ROAD

REQD EASMT AREA = 970.82 SF

REQ'D TEMP EASM'T PARCEL 1 TRACT 1 = 19904.95 SF

REQ'D TEMP EASM'T PARCEL 1 TRACT 2 = 970.82 SF

TOTAL REQ'D TEMP EASM'T PARCEL 1 TRACTS 1 & 2 = 20875.77 SF

PARCEL 3 REQ'D R/W KC5094

PNT OFFSET/ STATION/ ALIGNMENT

DIST BEARING

KC22273 67.73 R 190+18.00 OLD ATLANTA ROAD

ARC LENGTH = 30.565

CHORD BEAR = S 23°22'20.2" E

LNTH CHORD = 30.564

RADIUS = 1367.451

DEGREE = 4° 11' 23''

KC22274 67.23 R 190+50.00 OLD ATLANTA ROAD

48.51 S 58°19'18.6" W

KC22264 115.00 R 190+59.00 OLD ATLANTA ROAD

29.91 N 31°42'14.7" W

KC22263 120.00 R 190+27.00 OLD ATLANTA ROAD

52.94 N 57°57'53.5" E

KC22273 67.73 R 190+18.00 OLD ATLANTA ROAD

REQD R/W = 1527.19 SF

REQD R/W = 0.035 ACRES

REMAINDER = +/- 10 ACRES

PARCEL 3 TRACT 1 REQ'D TEMP. EASM'T. KC6122T1

PNT OFFSET STATION ALIGNMENT

SVXA14119 57.12 R 185+67.12 OLD ATLANTA ROAD

SVXA189 54.31 R 188+84.77 OLD ATLANTA ROAD

SVXA188 69.31 R 188+84.90 OLD ATLANTA ROAD

SVXA190 68.45 R 189+75.41 OLD ATLANTA ROAD

ARC LENGTH = 40.667

CHORD BEAR = S 24°51'52.5" E

LNTH CHORD = 40.665

RADIUS = 1367.451

DEGREE = 4° 11' 23''

KC22273 67.73 R 190+18.00 OLD ATLANTA ROAD

KC35443 96.00 R 190+22.78 OLD ATLANTA ROAD

KC35442 88.00 R 188+50.00 OLD ATLANTA ROAD

KC35441 88.00 R 185+67.50 OLD ATLANTA ROAD

SVXA14119 57.12 R 185+67.12 OLD ATLANTA ROAD

REQD EASMT AREA = 13551.61 SF

PARCEL 3 TRACT 2 REQ'D TEMP. EASM'T. KC6122T2

PNT OFFSET STATION ALIGNMENT

KC22274 67.23 R 190+50.00 OLD ATLANTA ROAD

ARC LENGTH = 33.917

CHORD BEAR = S 22°01'17.1" E

LNTH CHORD = 33.916

RADIUS = 1367.451

DEGREE = 4° 11' 23''

SVXA187 66.71 R 190+85.50 OLD ATLANTA ROAD

SVXA186 51.71 R 190+85.27 OLD ATLANTA ROAD

ARC LENGTH = 275.389

CHORD BEAR = S 15°36'14.8" E

LNTH CHORD = 274.934

RADIUS = 1382.451

DEGREE = 4° 8' 40''

SVXA6965 48.93 R 193+70.16 OLD ATLANTA ROAD

KC35460 69.06 R 193+67.06 OLD ATLANTA ROAD

KC35450 65.00 R 193+00.00 OLD ATLANTA ROAD

KC35449 82.00 R 192+50.00 OLD ATLANTA ROAD

KC35448 97.00 R 191+44.00 OLD ATLANTA ROAD

KC35447 97.00 R 190+55.54 OLD ATLANTA ROAD

KC22274 67.23 R 190+50.00 OLD ATLANTA ROAD

REQD EASMT AREA = 9879.57 SF

REQ'D TEMP EASM'T PARCEL 3 TRACT 1 = 13551.61 SF

REQ'D TEMP EASM'T PARCEL 3 TRACT 2 = 9879.57 SF

TOTAL REQ'D TEMP EASM'T PARCEL 3 TRACTS 1 & 2 = 23431.18 SF

PARCEL 4 TRACT 1 REQ'D R/W KC5092T1

PNT OFFSET/ STATION/ ALIGNMENT

DIST BEARING

KC22259 92.51 L 190+02.31 OLD ATLANTA ROAD

40.02 S 23°36'52.9" E

KC22257 93.00 L 190+40.00 OLD ATLANTA ROAD

34.00 S 67°48'10.1" W

KC22258 59.00 L 190+40.00 OLD ATLANTA ROAD

ARC LENGTH = 110.264

CHORD BEAR = S 15°01'37.5" E

LNTH CHORD = 110.241

RADIUS = 1557.348

DEGREE = 3° 40' 44''

KC22260 49.11 L 191+46.00 OLD ATLANTA ROAD

ARC LENGTH = 167.261

CHORD BEAR = N 22°03'45.1" W

LNTH CHORD = 167.173

RADIUS = 1482.451

DEGREE = 3° 51' 53''

SVXA14128 46.71 L 189+83.94 OLD ATLANTA ROAD

16.61 N 88°46'55.4" E

KC20039 62.00 L 189+90.20 OLD ATLANTA ROAD

33.06 N 88°46'55.4" E

KC22259 92.51 L 190+02.31 OLD ATLANTA ROAD

REQD R/W = 2838.93 SF

REQD R/W = 0.065 ACRES

PARCEL 4 TRACT 2 REQ'D R/W KC5092T2

PNT OFFSET/ STATION/ ALIGNMENT

DIST BEARING

KC22267 50.83 L 193+28.00 OLD ATLANTA ROAD

68.00 N 69°40'34.5" E

KC22265 118.00 L 193+18.00 OLD ATLANTA ROAD

30.50 S 18°34'42.4" E

KC22266 122.00 L 193+46.00 OLD ATLANTA ROAD

58.80 S 70°12'17.6" W

KC22268 64.00 L 193+55.10 OLD ATLANTA ROAD

13.17 S 88°34'00.4" W

SVXA14122 50.98 L 193+53.17 OLD ATLANTA ROAD

ARC LENGTH = 26.022

CHORD BEAR = N 11°03'29.4" W

LNTH CHORD = 26.022

RADIUS = 1482.451

DEGREE = 3° 51' 53''

KC22267 50.83 L 193+28.00 OLD ATLANTA ROAD

REQD R/W = 2082.71 SF

REQD R/W = 0.048 ACRES

REQ'D R/W PARCEL 4 TRACT 1 = 0.065 AC

REQ'D R/W PARCEL 4 TRACT 2 = 0.048 AC

TOTAL REQ'D R/W PARCEL 4 TRACTS 1 & 2 = 0.113 AC

REMAINDER = +/- 4.0 ACRES

PARCEL 4 TRACT 2 REQ'D TEMP. EASM'T. KC6123T2

PNT OFFSET STATION ALIGNMENT

KC35452 105.00 L 193+48.60 OLD ATLANTA ROAD

KC35457 103.73 L 193+60.80 OLD ATLANTA ROAD

KC22268 64.00 L 193+55.10 OLD ATLANTA ROAD

KC35452 105.00 L 193+48.60 OLD ATLANTA ROAD

REQD EASMT AREA = 263.08 SF

REQ'D TEMP EASM'T PARCEL 4 TRACT 1 = 15708.58 SF

REQ'D TEMP EASM'T PARCEL 4 TRACT 2 = 263.08 SF

TOTAL REQ'D TEMP EASM'T PARCEL 4 TRACTS 1 & 2 = 15971.66 SF

PARCEL 4

DRIVEWAYS = 1

PARCEL 5 REQ'D R/W KC5093

PNT OFFSET/ STATION/ ALIGNMENT

DIST BEARING

KC22269 51.61 L 196+18.00 OLD ATLANTA ROAD

87.62 S 8°32'11.3" E

KC22270 62.00 L 197+05.00 OLD ATLANTA ROAD

54.00 S 1°43'22.7" E

KC22271 62.00 L 197+59.00 OLD ATLANTA ROAD

23.23 S 23°36'39.3" W

KC22272 52.06 L 197+80.00 OLD ATLANTA ROAD

162.00 N 1°52'59.6" W

KC22269 51.61 L 196+18.00 OLD ATLANTA ROAD

REQD R/W = 1090.71 SF

REQD R/W = 0.025 ACRES

REMAINDER = +/- 4.3 ACRES

PARCEL 5 REQ'D TEMP. EASM'T. KC6124

PNT OFFSET STATION ALIGNMENT

KC35457 103.73 L 193+60.80 OLD ATLANTA ROAD

KC35456 105.00 L 197+00.00 OLD ATLANTA ROAD

KC35459 76.48 L 197+95.06 OLD ATLANTA ROAD

SVXA9074 52.10 L 197+94.98 OLD ATLANTA ROAD

KC22272 52.06 L 197+80.00 OLD ATLANTA ROAD

KC22271 62.00 L 197+59.00 OLD ATLANTA ROAD

KC22270 62.00 L 197+05.00 OLD ATLANTA ROAD

KC22269 51.61 L 196+18.00 OLD ATLANTA ROAD

SVXA184 51.48 L 195+70.12 OLD ATLANTA ROAD

ARC LENGTH = 224.379

CHORD BEAR = N 6°13'09.3" W

LNTH CHORD = 224.165

RADIUS = 1482.451

DEGREE = 3° 51' 53''

SVXA14122 50.98 L 193+53.17 OLD ATLANTA ROAD

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PARCEL 6 REQ'D R/W KC5099				PARCEL 8 REQ'D TEMP. EASM'T. KC6127				PARCEL 10 REQ'D TEMP. EASM'T. KC6129				PARCEL 12 REQ'D TEMP. EASM'T. KC6131			
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PNT	OFFSET/ DIST	STATION/ BEARING	ALIGNMENT	PNT	OFFSET	STATION	ALIGNMENT	PNT	OFFSET	STATION	ALIGNMENT	PNT	OFFSET	STATION	ALIGNMENT
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KC22285	62.88 L	200+75.00	OLD ATLANTA ROAD	SVXA14032	48.57 R	194+64.89	OLD ATLANTA ROAD	KC22279	78.00 R	198+22.40	OLD ATLANTA ROAD	KC22282	58.00 R	199+72.54	OLD ATLANTA ROAD
ARC LENGTH = 77.515				ARC LENGTH = 77.515				KC22280				KC22281			
CHORD BEAR = S 4°29'31.7" E				CHORD BEAR = S 4°29'31.7" E				KC22282				SVXA14003			
LNTH CHORD = 77.504				LNTH CHORD = 77.504				KC35474				KC35478			
RADIUS = 1382.451				RADIUS = 1382.451				KC35468				KC35476			
DEGREE = 4° 8' 40"				DEGREE = 4° 8' 40"				KC35467				KC35475			
SVXA9069	63.01 L	201+19.10	OLD ATLANTA ROAD	KC22275	48.50 R	195+45.00	OLD ATLANTA ROAD	REQD EASMT AREA = 2284.92 SF				KC35473			
S 88°41'00.4" W				KC22276				*****				*****			
N 1°52'59.6" W				KC22276				PARCEL 11 REQ'D R/W KC5100				*****			
200+75.00				KC22276				*****				*****			
REQD R/W = 311.33 SF				KC22276				PNT	OFFSET/ DIST	STATION/ BEARING	ALIGNMENT	*****			
REQD R/W = 0.007 ACRES				KC22276				SVXA9069	63.01 L	201+19.10	OLD ATLANTA ROAD	*****			
REMAINDER = +/- 3.0 ACRES				KC22276				KC22286	70.00 L	201+19.15	OLD ATLANTA ROAD	*****			
*****				*****				*****				*****			
*****				*****				KC22287	70.00 L	201+70.00	OLD ATLANTA ROAD	*****			
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*****				*****				KC22288	63.15 L	201+70.00	OLD ATLANTA ROAD	*****			
*****				*****				*****				*****			
*****				*****				SVXA9069	63.01 L	201+19.10	OLD ATLANTA ROAD	*****			
*****				*****				*****				*****			
*****				*****				REQD R/W = 352.14 SF	*****						
*****				*****				REQD R/W = 0.008 ACRES	*****						
*****				*****				REMAINDER = +/- 5.9 ACRES	*****						
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*****				*****				PARCEL 11 REQ'D TEMP. EASM'T. KC6130	*****						
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*****				*****				*****				*****			
*****				*****				KC35470	85.00 L	201+19.26	OLD ATLANTA ROAD	*****			
*****				*****				KC35471	85.00 L	203+00.00	OLD ATLANTA ROAD	*****			
*****				*****				KC35472	75.00 L	204+00.00	OLD ATLANTA ROAD	*****			
*****				*****				KC35489	70.00 L	207+00.00	OLD ATLANTA ROAD	*****			
*****				*****				KC35490	70.00 L	207+83.76	OLD ATLANTA ROAD	*****			
*****				*****				SVXA9072	52.15 L	207+80.42	OLD ATLANTA ROAD	*****			
*****				*****				*****				*****			
*****				*****				ARC LENGTH = 117.533	*****						
*****				*****				CHORD BEAR = N 5°55'55.5" W	*****						
*****				*****				LNTH CHORD = 117.436	*****						
*****				*****				RADIUS = 831.608	*****						
*****				*****				DEGREE = 6° 53' 23"	*****						
*****				*****				SVXA177	54.29 L	206+55.52	OLD ATLANTA ROAD	*****			
*****				*****				SVXA180	53.47 L	202+84.20	OLD ATLANTA ROAD	*****			
*****				*****				SVXA181	63.47 L	202+84.17	OLD ATLANTA ROAD	*****			
*****				*****				KC22288	63.15 L	201+70.00	OLD ATLANTA ROAD	*****			
*****				*****				KC22287	70.00 L	201+70.00	OLD ATLANTA ROAD	*****			
*****				*****				KC22286	70.00 L	201+19.15	OLD ATLANTA ROAD	*****			
*****				*****				KC35470	85.00 L	201+19.26	OLD ATLANTA ROAD	*****			
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*****				*****				REQD EASMT AREA = 13439.82 SF	*****						
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*****				*****				PARCEL 12 REQ'D R/W KC5098	*****						
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*****				*****				*****				*****			
*****				*****				SVXA13984	57.40 R	199+72.54	OLD ATLANTA ROAD	*****			
*****				*****				*****				*****			
*****				*****				KC22283	57.33 R	S 1°52'59.6" E	OLD ATLANTA ROAD	*****			
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*****				*****				KC22281	58.00 R	S 88°16'37.3" W	OLD ATLANTA ROAD	*****			
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*****				*****				KC22282	58.00 R	S 88°16'37.3" W	OLD ATLANTA ROAD	*****			
*****				*****				*****				*****			
*****				*****				SVXA13984	57.40 R	199+72.54	OLD ATLANTA ROAD	*****			
*****				*****				REQD R/W = 17.43 SF	*****						
*****				*****				REQD R/W = 0.000 ACRES	*****						
*****				*****				REMAINDER = +/- 0.47 ACRES	*****						
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PARCEL 6 REQ'D TEMP. EASM'T. KC6125				PARCEL 9 REQ'D R/W KC5096				PARCEL 13 REQ'D TEMP. EASM'T. KC6132				*****				
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PNT	OFFSET	STATION	ALIGNMENT	PNT	OFFSET/ DIST	STATION/ BEARING	ALIGNMENT	PNT	OFFSET	STATION	ALIGNMENT	PNT	OFFSET	STATION	ALIGNMENT	
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KC35459	76.48 L	197+95.06	OLD ATLANTA ROAD	SVXA14030	48.24 R	196+72.32	OLD ATLANTA ROAD	SVXA14003	56.85 R	201+69.51	OLD ATLANTA ROAD	SVXA14003	56.85 R	201+69.51	OLD ATLANTA ROAD	
KC35458	75.00 L	198+00.00	OLD ATLANTA ROAD	80.08 S 1°52'59.6" E				SVXA13985	56.63 R	202+50.83	OLD ATLANTA ROAD	SVXA13985	56.63 R	202+50.83	OLD ATLANTA ROAD	
KC35469	85.00 L	200+00.00	OLD ATLANTA ROAD	SVXA14023	48.02 R	197+52.40	OLD ATLANTA ROAD	SVXA13986	75.24 R	202+69.39	OLD ATLANTA ROAD	SVXA13986	75.24 R	202+69.39	OLD ATLANTA ROAD	
KC35470	85.00 L	201+19.26	OLD ATLANTA ROAD	ARC LENGTH = 31.597	S 43°22'32.1" W				KC35479	105.00 R	202+69.07	OLD ATLANTA ROAD	KC35479	105.00 R	202+69.07	OLD ATLANTA ROAD
KC22286	70.00 L	201+19.15	OLD ATLANTA ROAD	CHORD BEAR = S 43°22'32.1" W	LNTH CHORD = 28.412				KC35477	81.00 R	202+49.00	OLD ATLANTA ROAD	KC35477	81.00 R	202+49.00	OLD ATLANTA ROAD
KC22284	70.00 L	200+75.00	OLD ATLANTA ROAD	RADIUS = 20.000	DEGREE = 286° 28' 43"				KC35478	76.17 R	201+69.37	OLD ATLANTA ROAD	KC35478	76.17 R	201+69.37	OLD ATLANTA ROAD
KC22285	62.88 L	200+75.00	OLD ATLANTA ROAD	SVXA14043	68.14 R	197+72.46	OLD ATLANTA ROAD	SVXA14003	56.85 R	201+69.51	OLD ATLANTA ROAD	SVXA14003	56.85 R	201+69.51	OLD ATLANTA ROAD	
SVXA182	62.63 L	199+84.17	OLD ATLANTA ROAD	KC22278	79.00 R	197+72.39	OLD ATLANTA ROAD	REQD EASMT AREA = 2306.35 SF				*****				
SVXA183	52.63 L	199+84.20	OLD ATLANTA ROAD	KC22277	56.00 R	197+49.00	OLD ATLANTA ROAD	*****				*****				
SVXA9074	52.10 L	197+94.98	OLD ATLANTA ROAD	KC22366	56.00 R	196+68.46	OLD ATLANTA ROAD	*****				*****				
KC35459	76.48 L	197+95.06	OLD ATLANTA ROAD	8.66 S 65°15'53.1" E				*****				*****				
REQD EASMT AREA = 7810.50 SF				SVXA14030	48.24 R	196+72.32	OLD ATLANTA ROAD	*****				*****				
*****				REQD R/W = 989.44 SF	*****				*****				*****			
*****				REQD R/W = 0.023 ACRES	*****				*****				*****			
*****				REMAINDER = +/- 0.73 ACRES	*****				*****				*****			
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STATE

GA

PROJECT NUMBER

WID 0208-1

SHEET NO.

25

TOTAL SHEETS

25

PARCEL 55

REQ'D R/W

KC5123

PNT	OFFSET/ DIST	STATION/ BEARING	ALIGNMENT
KC22376	83.00 L	251+43.03	OLD ATLANTA ROAD
	31.94 S	0°00'58.5" W	
KC22377	62.00 L	251+68.00	OLD ATLANTA ROAD
ARC LENGTH = 99.807			
CHORD BEAR = S 42°55'58.6" E			
LNTH CHORD = 99.796			
RADIUS = 1938.284			
DEGREE = 2° 57' 21''			
KC22378	62.00 L	252+71.00	OLD ATLANTA ROAD
	40.97 S	38°56'48.3" E	
KC22379	57.67 L	253+13.00	OLD ATLANTA ROAD
ARC LENGTH = 144.921			
CHORD BEAR = N 44°24'08.2" W			
LNTH CHORD = 144.884			
RADIUS = 1860.029			
DEGREE = 3° 4' 49''			
SVXA927	55.33 L	251+63.89	OLD ATLANTA ROAD
ARC LENGTH = 32.514			
CHORD BEAR = N 4°24'10.8" E			
LNTH CHORD = 29.050			
RADIUS = 20.000			
DEGREE = 286° 28' 44''			
SVXA929	76.03 L	251+42.81	OLD ATLANTA ROAD
	5.18 N	50°58'34.6" E	
SVXA911	81.20 L	251+42.97	OLD ATLANTA ROAD
	1.80 N	51°03'18.9" E	
KC22376	83.00 L	251+43.03	OLD ATLANTA ROAD
REQD R/W = 1024.42 SF			
REQD R/W = 0.024 ACRES			
REMAINDER = +/- 0.80 ACRES			
PNT	OFFSET	STATION	ALIGNMENT
KC35575	100.00 L	251+43.85	OLD ATLANTA ROAD
KC35576	89.00 L	251+76.00	OLD ATLANTA ROAD
KC35577	100.00 L	252+50.00	OLD ATLANTA ROAD
KC35578	75.00 L	253+00.00	OLD ATLANTA ROAD
KC35579	78.26 L	253+69.61	OLD ATLANTA ROAD
SVXA950	58.29 L	253+47.68	OLD ATLANTA ROAD
ARC LENGTH = 33.684			
CHORD BEAR = N 47°09'11.3" W			
LNTH CHORD = 33.684			
RADIUS = 1860.029			
DEGREE = 3° 4' 49''			
KC22379	57.67 L	253+13.00	OLD ATLANTA ROAD
KC22378	62.00 L	252+71.00	OLD ATLANTA ROAD
ARC LENGTH = 99.807			
CHORD BEAR = N 42°55'58.6" W			
LNTH CHORD = 99.796			
RADIUS = 1938.284			
DEGREE = 2° 57' 21''			
KC22377	62.00 L	251+68.00	OLD ATLANTA ROAD
KC22376	83.00 L	251+43.03	OLD ATLANTA ROAD
ARC LENGTH = 17.021			
CHORD BEAR = N 51°52'55.6" E			
LNTH CHORD = 17.020			
RADIUS = 652.053			
DEGREE = 8° 47' 13''			
KC35575	100.00 L	251+43.85	OLD ATLANTA ROAD
REQD EASMT AREA = 5418.26 SF			
PNT	OFFSET/ DIST	STATION/ BEARING	ALIGNMENT
SVXA590	60.86 R	253+95.69	OLD ATLANTA ROAD
	20.23 S	3°08'32.3" E	
SVXA591	75.17 R	254+09.51	OLD ATLANTA ROAD
ARC LENGTH = 18.853			
CHORD BEAR = S 44°37'46.9" W			
LNTH CHORD = 18.852			
RADIUS = 575.000			
DEGREE = 9° 57' 52''			
KC22380	94.00 R	254+08.57	OLD ATLANTA ROAD
	35.74 N	19°50'59.3" E	
SVXA590	60.86 R	253+95.69	OLD ATLANTA ROAD
REQD R/W = 142.16 SF			
REQD R/W = 0.003 ACRES			
REMAINDER = +/- 2.4 ACRES			
PNT	OFFSET	STATION	ALIGNMENT
SVXA623	63.46 R	252+45.57	OLD ATLANTA ROAD
ARC LENGTH = 146.535			
CHORD BEAR = S 46°40'47.1" E			
LNTH CHORD = 146.501			
RADIUS = 1980.029			
DEGREE = 2° 53' 37''			
SVXA154	61.00 R	253+87.66	OLD ATLANTA ROAD
SVXA590	60.86 R	253+95.69	OLD ATLANTA ROAD
KC22380	94.00 R	254+08.57	OLD ATLANTA ROAD
ARC LENGTH = 25.098			
CHORD BEAR = S 46°48'27.6" W			
LNTH CHORD = 25.096			
RADIUS = 575.000			
DEGREE = 9° 57' 52''			
KC35582	119.00 R	254+06.44	OLD ATLANTA ROAD
KC35581	89.00 R	253+94.00	OLD ATLANTA ROAD
KC35572	93.00 R	252+17.59	OLD ATLANTA ROAD
SVXA623	63.46 R	252+45.57	OLD ATLANTA ROAD
REQD EASMT AREA = 5003.47 SF			
PNT	OFFSET/ DIST	STATION/ BEARING	ALIGNMENT
KC22381	58.92 L	254+85.00	OLD ATLANTA ROAD
	70.08 N	40°43'47.6" E	
KC22382	129.00 L	254+85.00	OLD ATLANTA ROAD
	31.00 S	49°16'12.4" E	
KC22383	129.00 L	255+16.00	OLD ATLANTA ROAD
	70.33 S	40°43'47.6" W	
KC22384	58.67 L	255+16.00	OLD ATLANTA ROAD
	31.00 N	48°47'59.6" W	
KC22381	58.92 L	254+85.00	OLD ATLANTA ROAD
REQD R/W = 2176.38 SF			
REQD R/W = 0.050 ACRES			
REMAINDER = +/- 17 ACRES			
PNT	OFFSET	STATION	ALIGNMENT
KC35579	78.26 L	253+69.61	OLD ATLANTA ROAD
KC35580	79.00 L	254+85.00	OLD ATLANTA ROAD
KC22381	58.92 L	254+85.00	OLD ATLANTA ROAD
SVXA155	58.98 L	253+85.40	OLD ATLANTA ROAD
ARC LENGTH = 36.617			
CHORD BEAR = N 48°14'09.3" W			
LNTH CHORD = 36.617			
RADIUS = 1860.029			
DEGREE = 3° 4' 49''			
SVXA950	58.29 L	253+47.68	OLD ATLANTA ROAD
KC35579	78.26 L	253+69.61	OLD ATLANTA ROAD
REQD EASMT AREA = 2450.91 SF			
PNT	OFFSET	STATION	ALIGNMENT
KC35583	80.00 L	255+16.00	OLD ATLANTA ROAD
KC35584	82.00 L	256+00.00	OLD ATLANTA ROAD
KC35585	102.00 L	257+00.00	OLD ATLANTA ROAD
KC35586	101.00 L	258+50.00	OLD ATLANTA ROAD
KC35587	94.00 L	259+00.00	OLD ATLANTA ROAD
KC35588	62.85 L	259+66.00	OLD ATLANTA ROAD
ARC LENGTH = 88.695			
CHORD BEAR = N 45°52'28.0" W			
LNTH CHORD = 88.657			
RADIUS = 868.563			
DEGREE = 6° 35' 47''			
SVXA149	58.06 L	258+82.74	OLD ATLANTA ROAD
KC22384	58.67 L	255+16.00	OLD ATLANTA ROAD
KC35583	80.00 L	255+16.00	OLD ATLANTA ROAD
REQD EASMT AREA = 15500.29 SF			