

# CONSTRUCTION PLANS FOR 12th STREET CULVERT REPLACEMENT

LOCATED AT  
NORTH 12th STREET AND WHEELER STREET

GRIFFIN, GA  
JUNE 2017

PREPARED BY  
**PARAGON CONSULTING GROUP**

118 NORTH EXPRESSWAY GRIFFIN, GA. 30223  
PH. (770) 412-7700 FAX (770) 412-7744

DEVELOPER 24 HOUR CONTACT:  
CHRIS WALKER  
PH: (770) 229-6603  
CELL: (678) 588-4244  
100 SOUTH HILL STREET  
GRIFFIN, GEORGIA 30224



GPS LOCATION OF CONSTRUCTION EXIT  
LATITUDE: 33.2555 N  
LONGITUDE: 84.2703 W

**DRAWING LIST**

- 1 - Cover Sheet
- 2 - Existing Conditions/Demo Plan
- 3 - Site Development Plan
- 4 - Site Grading Plan
- 5 - Culvert Cross Section Plan
- 6 - Utility Plan
- 7 - Initial Erosion Control Plan
- 8 - Final Erosion Control Plan
- 9 - Signage and Pavement Marking Plan
- 10 - Erosion Control Details
- 11 - Erosion Control Details
- 12 - Construction Details
- 13 - Construction Details
- 14 - Construction Details
- 15 - Construction Details

No.	Revisions:	Date



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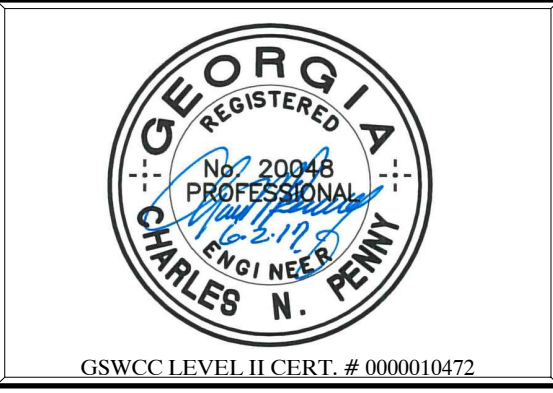
CONSTRUCTION PLANS FOR  
**12th STREET CULVERT  
REPLACEMENT**

LOCATED IN LANDLOT 129 OF THE 3rd DISTRICT, SPALDING COUNTY

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SHEET:  
COVER

PE #: PEF004167



Project No. 16054.00 Issue Date: JUNE 2017  
Drawn By: DMG Checked By: CNP

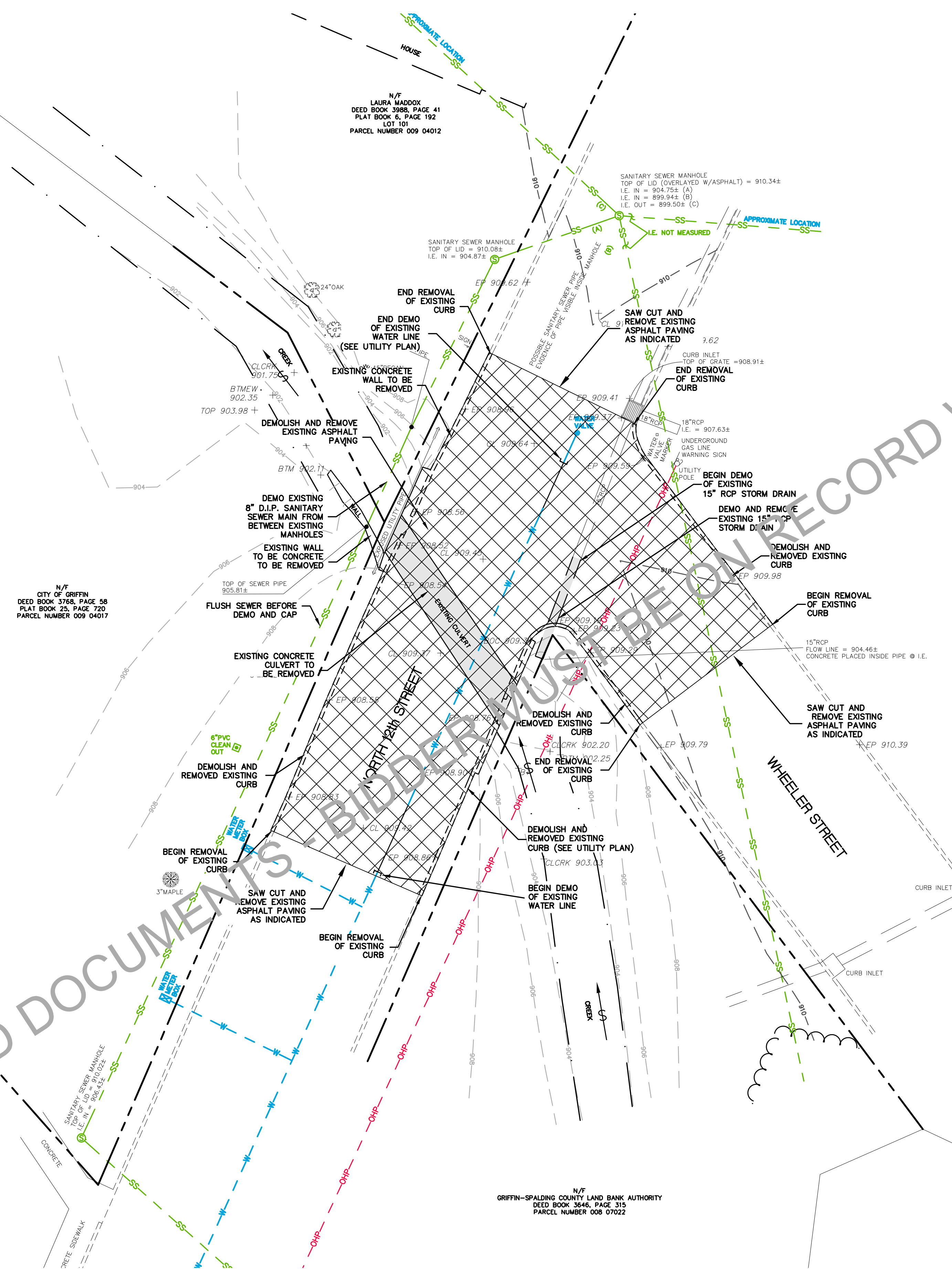
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SHEET 1 OF 15

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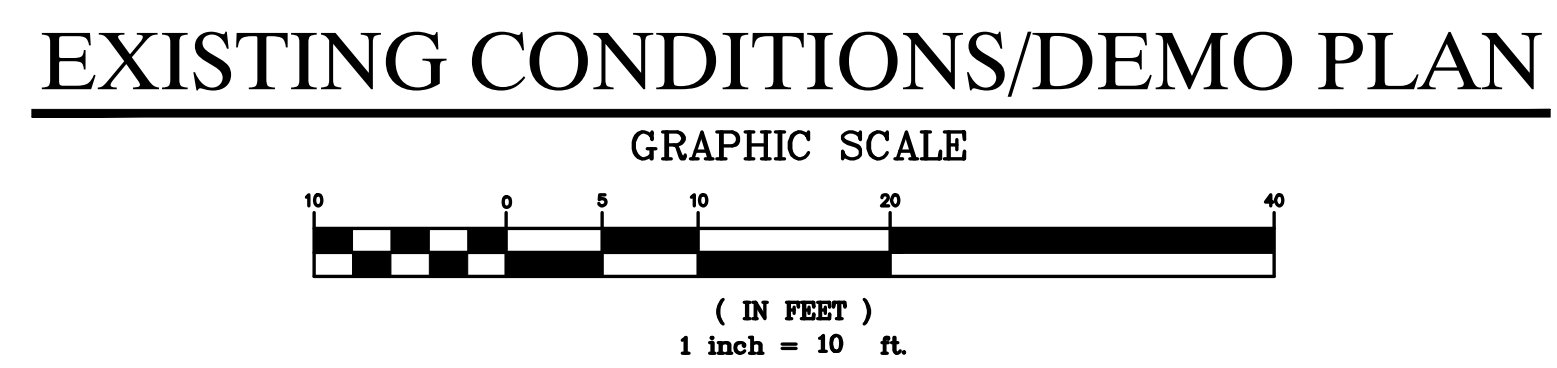
CONSTRUCTION PLANS FOR

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LOCATED IN LANDLOT 129 OF THE 3rd DISTRICT, SPALDING COUNTY



- NOTES:**
1. WATER MAIN WORK MUST BE FINALIZED BEFORE DEMOLITION - MAIN GOES THROUGH THE EXISTING CULVERT.
  2. GAS MARKER LOOKS LIKE IT ENDS BEFORE THE CULVERT BUT THIS NEEDS TO BE VERIFIED WITH AGL.
  3. FLUSH SEWER BEFORE DEMOLITION - NO SERVICES WILL BE ACTIVE AT CONSTRUCTION ONSET.

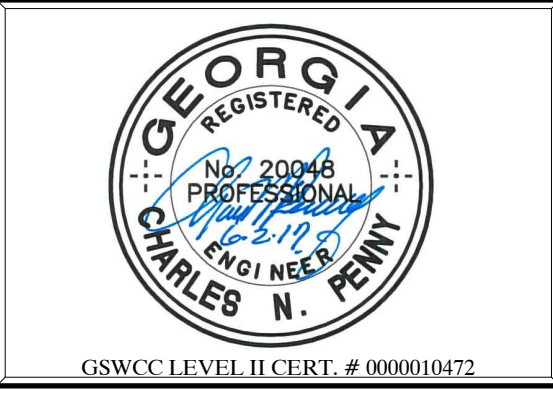


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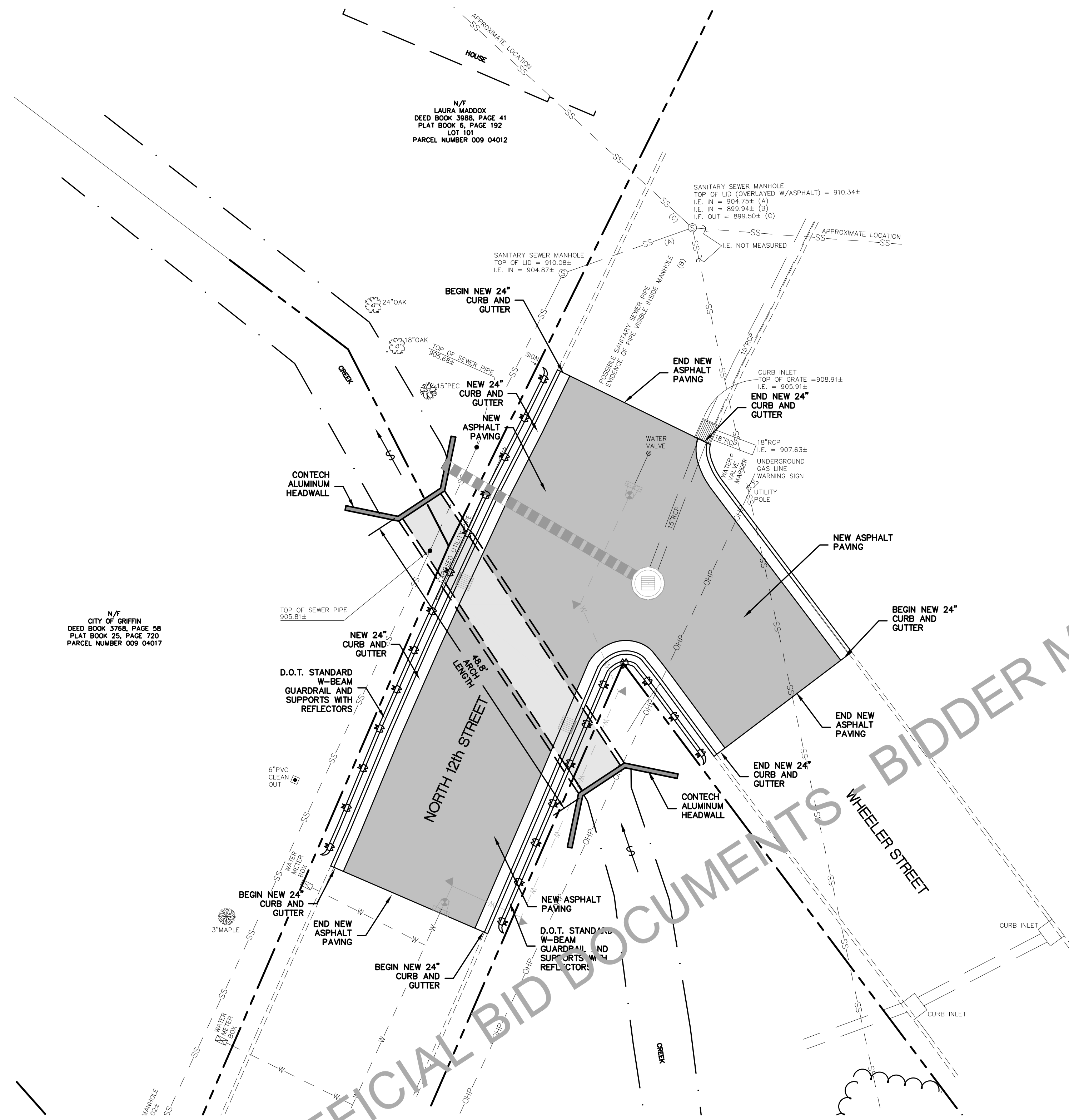
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SHEET:  
SITE DEMOLITION PLAN

PE #: PEF004167



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**SITE DEVELOPMENT PLAN**

GRAPHIC SCALE



( IN FEET )  
1 inch = 10 ft.

**GENERAL NOTES**

- CONTRACTOR IS TO COMPLY WITH ALL LOCAL BUILDING CODES AND REGULATIONS WHICH ARE PRESENTLY IN EFFECT.
- THE CONTRACTOR IS SPECIFICALLY CAUTIONED ABOUT THE LOCATION AND/OR ELEVATIONS OF EXISTING UTILITIES SHOWN ON THIS DRAWING. THEY ARE BASED UPON RECORDS FROM VARIOUS UTILITY COMPANIES, DEEDS AND PLATS OF RECORD, AND WHERE POSSIBLE, ACTUAL FIELD MEASUREMENTS. THIS INFORMATION IS NOT TO BE TAKEN AS EXACT NOR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 24 HOURS PRIOR TO ANY EXCAVATION TO REQUEST EXACT FIELD LOCATIONS OF RESPECTIVE UTILITIES. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE EXACT LOCATION OF EXISTING UTILITIES WHICH MAY CONFLICT WITH PROPOSED IMPROVEMENTS. UPC# 1-800-282-7411
- CONTRACTOR SHALL ASSURE THAT ALL FINAL INSPECTIONS ARE MADE.
- A COPY OF THE APPROVED CONSTRUCTION PLANS SHALL BE KEPT ON THE JOB SITE AT ALL TIMES THAT CONSTRUCTION IS UNDER WAY.
- IT IS THE DEVELOPER'S RESPONSIBILITY TO COMPLY WITH ALL STATE AND FEDERAL LAWS AND REGULATIONS THAT APPLY TO THE PROJECT.
- IT IS THE RESPONSIBILITY OF THE DEVELOPER TO ACQUIRE ANY OFFSITE EASEMENTS BEFORE CONSTRUCTION BEGINS. PERMIT ISSUANCE SHALL OCCUR AFTER ALL OFF-SITE EASEMENTS ARE OBTAINED. ANY OFF-SITE EASEMENTS FOR PUBLIC AND UTILITIES USE SHALL BE OBTAINED IN THE NAME OF THE CITY OF GRIFFIN.
- GRADING SHALL COMPLETED TO SUBGRADE ELEVATION. IT SHOULD BE NOTED THAT FINISH WITH SURFACE GRADES ARE SHOWN ON THIS PLAN, AND THE CONTRACTOR SHALL MAKE ALLOWANCES FOR PAVEMENT, STONE, AND SLAB THICKNESSES.
- ALL FINISHED GRADING AND PAVING SHALL HAVE POSITIVE DRAINAGE.
- ALL PERIMETER SEDIMENT BARRIERS, BARRIERS AT CLEARING LIMITS SHALL BE CONSTRUCTED PRIOR TO ISSUANCE OF GRADING PERMIT.
- THE REMAINING EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO OR CONCURRENT WITH LAND DISTURBING ACTIVITIES.
- EROSION AND SEDIMENTATION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. ADDITIONAL EROSION AND SEDIMENTATION CONTROL MEASURES AND PRACTICES WILL BE INSTALLED IF DEEMED NECESSARY BY ONSITE INSPECTION.
- THE DISTURBED AREA AND THE DURATION OF EXPOSURE TO EROSION ELEMENTS SHALL BE KEPT TO A PRACTICABLE MINIMUM. TEMPORARY VEGETATION OR MULCHING SHALL BE EMPLOYED TO PROTECT EXPOSED CRITICAL AREAS DURING CONSTRUCTION.
- PERMANENT VEGETATION SHALL BE ESTABLISHED AS SOON AS PRACTICABLE.
- ALL CONSTRUCTION SHALL COMPLY WITH THE MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA, LATEST EDITION.
- MAINTENANCE OF ALL SOIL EROSION AND SEDIMENTATION CONTROL PRACTICES, WHETHER TEMPORARY OR PERMANENT, SHALL BE AT ALL TIMES THE RESPONSIBILITY OF THE PROPERTY OWNER.

**SITE NARRATIVE**

- BOUNDARY AND TOPOGRAPHICAL DATA TAKEN FROM INFORMATION PREPARED BY S.L. COLWELL AND ASSOCIATES 265 CRAWFORD ROAD, BARNESVILLE, GEORGIA 30204
- PROPERTY LOCATED IN LAND LOT 129 OF THE 3rd DISTRICT, SPALDING COUNTY, GEORGIA.
- PROPERTY OWNER: CITY OF GRIFFIN  
CONTACT: CHRIS WALKER  
SITE ZONED: N/A  
SITE USAGE: DRAINAGE CULVERT  
BUILDING SETBACKS: N/A
- ALL CONSTRUCTION SHALL CONFORM TO THE CITY OF GRIFFIN STANDARD SPECIFICATIONS AND REGULATIONS.
- PERSONS USING THIS DRAWING SHOULD CONTACT LOCAL UTILITY COMPANIES & MUNICIPALITIES FOR EXACT LOCATIONS OF UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION.
- DO NOT SCALE THIS DRAWING AS IT IS A REPRODUCTION AND SUBJECT TO DISTORTION.
- OWNER/DEVELOPER CONTACT: CHRIS WALKER  
(770) 229-8611  
100 SOUTH 7011 STREET  
GRIFFIN, GEORGIA 30224

**PARAGON**  
CONSULTING GROUP

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CONSTRUCTION PLANS FOR

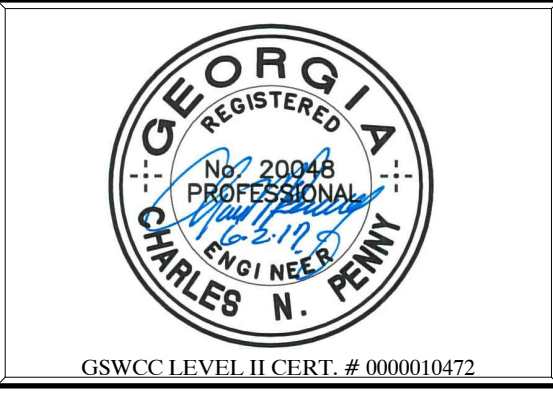
**12th STREET CULVERT REPLACEMENT**

LOCATED IN LANDLOT 129 OF THE 3rd DISTRICT, SPALDING COUNTY

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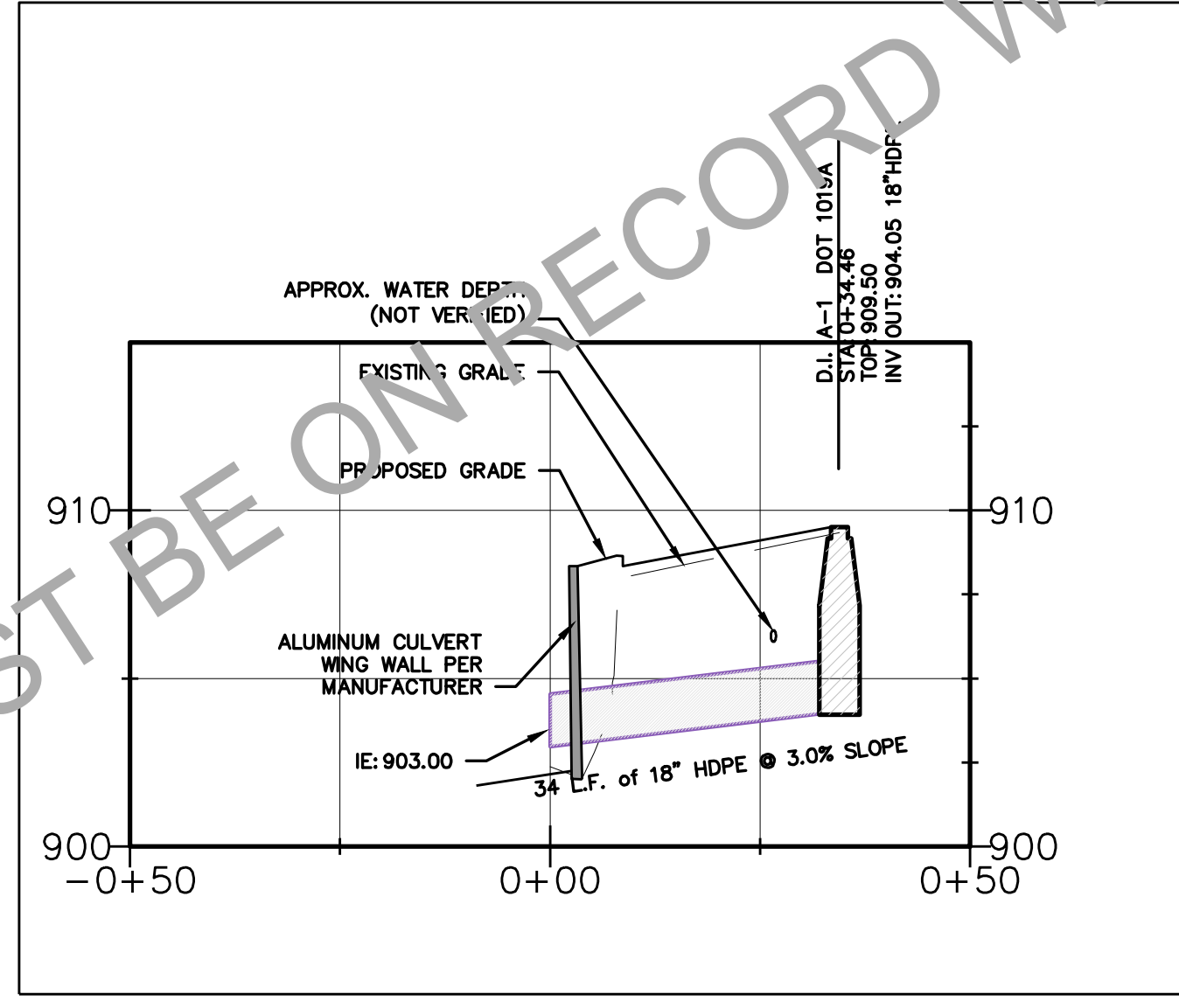
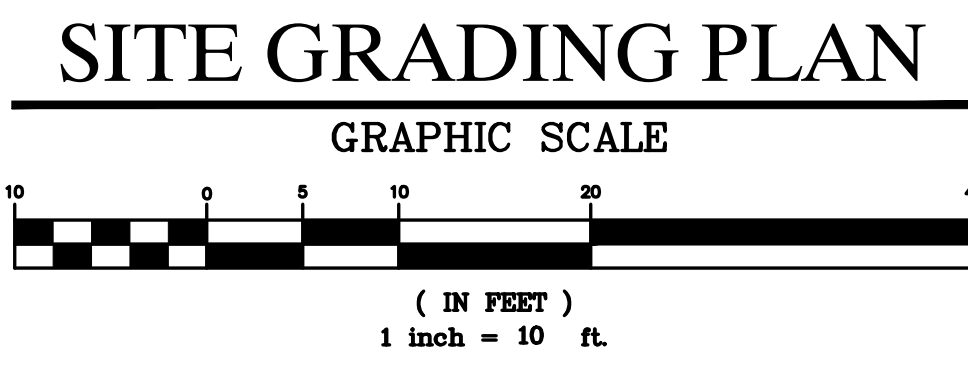
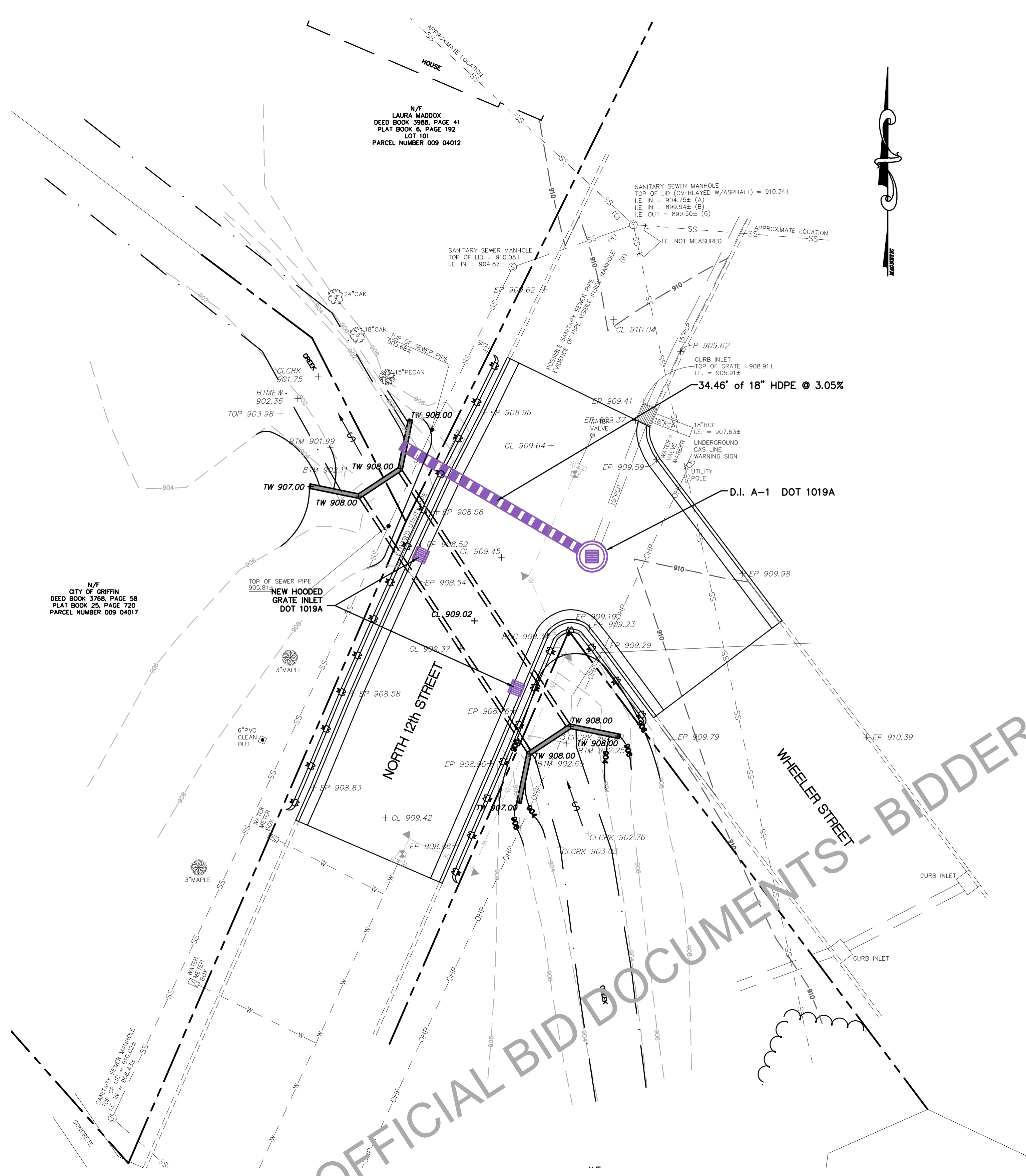
SHEET:  
SITE PLAN

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**STORM DRAIN LINE 'A'**  
HORIZONTAL SCALE 1"=20'  
VERTICAL SCALE 1"=5'

- STORM DRAINAGE NOTES**
1. ALL STORM DRAINAGE PIPE SHOWN HEREON SHALL BE HIGH DENSITY POLYETHYLENE PIPE.
  2. ALL PIPE CONNECTIONS AT C.B.'S, J.B.'S, ETC. SHALL BE GROUTED ON THE OUTSIDE AND INSIDE OF THE STRUCTURES.
  3. TRENCH BACKFILL MATERIAL SHALL BE FREE OF ROOTS, STUMPS, OR OTHER DEBRIS AND SHALL BE COMPACTED TO 95% STANDARD PROCTOR OR AS PER SPECIFICATIONS.
  4. ALL CATCH BASINS, DROP INLETS, AND JUNCTION BOXES SHALL HAVE PAVED INVERTS, MATCHING LOWEST INVERT & SLOPING UP TO 1/4 PIPE DIA.
  5. CONTRACTOR TO NOTIFY ENGINEER FOR ASSISTANCE IN LOCATING OUTFLOW HEADWALLS IF STAKED LOCATION IN THE FIELD DOES NOT ALIGN WITH NATURAL FEATURES AS INDICATED ON THE PLANS.

- GRADING NOTES**
1. ALL SPOT ELEVATIONS ARE TOP OF PAVEMENT UNLESS OTHERWISE NOTED.
  2. ALL CONTOURS ON PAVEMENT ARE FINISHED ELEVATIONS.
  3. CONTRACTOR IS RESPONSIBLE FOR NOTIFYING ALL UTILITIES BEFORE CONSTRUCTION AND VERIFYING LOCATION OF ALL UTILITIES SHOWN OR NOT SHOWN.
  4. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OF ALL DEBRIS AS ACCEPTABLE TO THE OWNER AND ENGINEER AND IN COMPLIANCE WITH ALL FEDERAL, STATE AND LOCAL LAWS.
  5. CONTRACTOR IS RESPONSIBLE FOR REPAIRS OF DAMAGE TO ANY EXISTING IMPROVEMENTS DURING CONSTRUCTION, SUCH AS, BUT NOT LIMITED TO, DRAINAGE, UTILITIES, PAVEMENT, STRIPING, CURBS, ETC. REPAIRS SHALL BE EQUAL TO OR BETTER THAN EXISTING CONDITIONS.
  6. SOIL FROM FOOTINGS IS THE SITE CONTRACTOR'S RESPONSIBILITY. CONTRACTOR IS TO USE THE SOIL ON SITE OR REMOVE IT FROM PROJECT AND DISPOSE OF SOIL LEGALLY.
  7. THE EARTHWORK FOR ALL BUILDING FOUNDATIONS AND SLABS SHALL BE IN ACCORDANCE WITH ARCHITECTURAL PLANS AND SPECIFICATIONS.
  8. CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE AWAY FROM THE BUILDINGS.
  9. SLOPES AND DISTURBED AREAS NOT COVERED BY BUILDING OR PAVEMENT SHALL BE GRADED SMOOTH AND RECEIVE 4 INCHES OF TOPSOIL. CONTRACTOR TO PROVIDE TOPSOIL IF NOT AVAILABLE ON SITE. THE AREAS SHALL BE SEEDED AND COVERED WITH MATTING AS DESIGNATED ON PLANS, FERTILIZED AND WATERED TO PROVIDE A HEARTY, MOWABLE STAND OF GRASS. SMALL ROCKS MUST BE REMOVED. ANY AREAS DISTURBED FOR ANY REASON PRIOR TO FINAL ACCEPTANCE OF THE PROJECT SHALL BE CORRECTED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
  10. EARTHWORK SHALL BE ON AN UNCLASSIFIED BASIS.
  11. CONTRACTOR TO NOTIFY ENGINEER IF INVERTS ON OUTLET PIPES DO NOT MATCH EXISTING ELEVATIONS AS INDICATED ON PLANS.
  12. CONTRACTOR TO NOTIFY ENGINEER FOR ASSISTANCE IN LOCATING OUTFLOW HEADWALLS IF STAKED LOCATION IN THE FIELD DOES NOT ALIGN WITH NATURAL FEATURES AS INDICATED ON THE PLANS.
  13. MAXIMUM SLOPES ON CUT OR FILL SECTIONS SHALL NOT EXCEED 2:1.

**BRIDGE PLAN VIEW**  
SCALE: 1" = 10'

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CONSTRUCTION PLANS FOR

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SHEET:  
GRADING PLAN

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CONSTRUCTION PLANS FOR

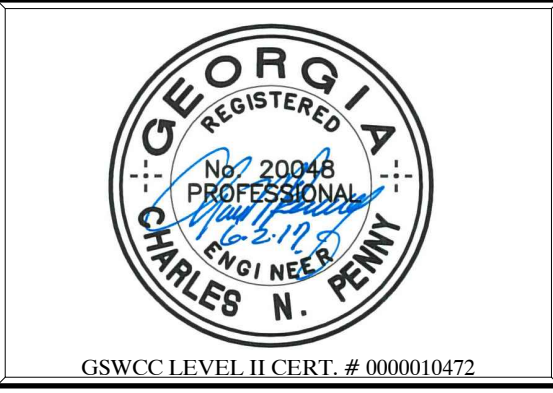
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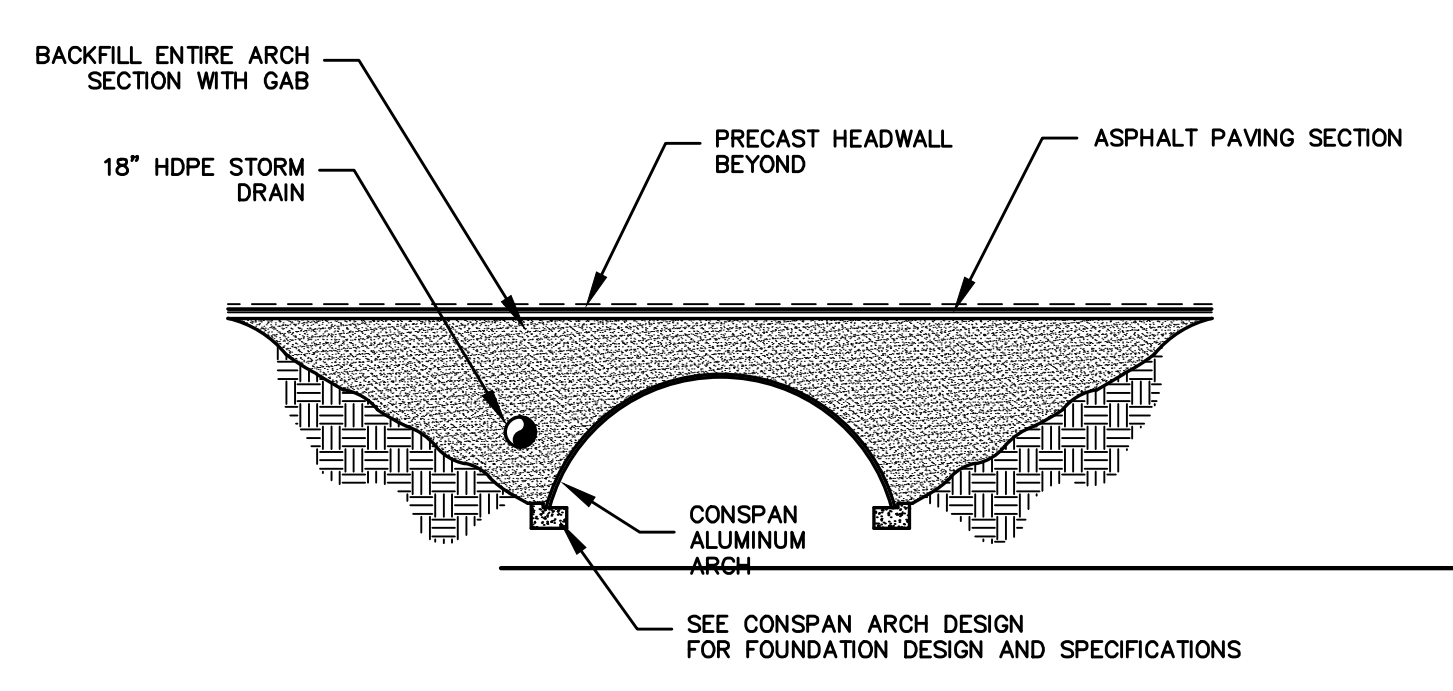
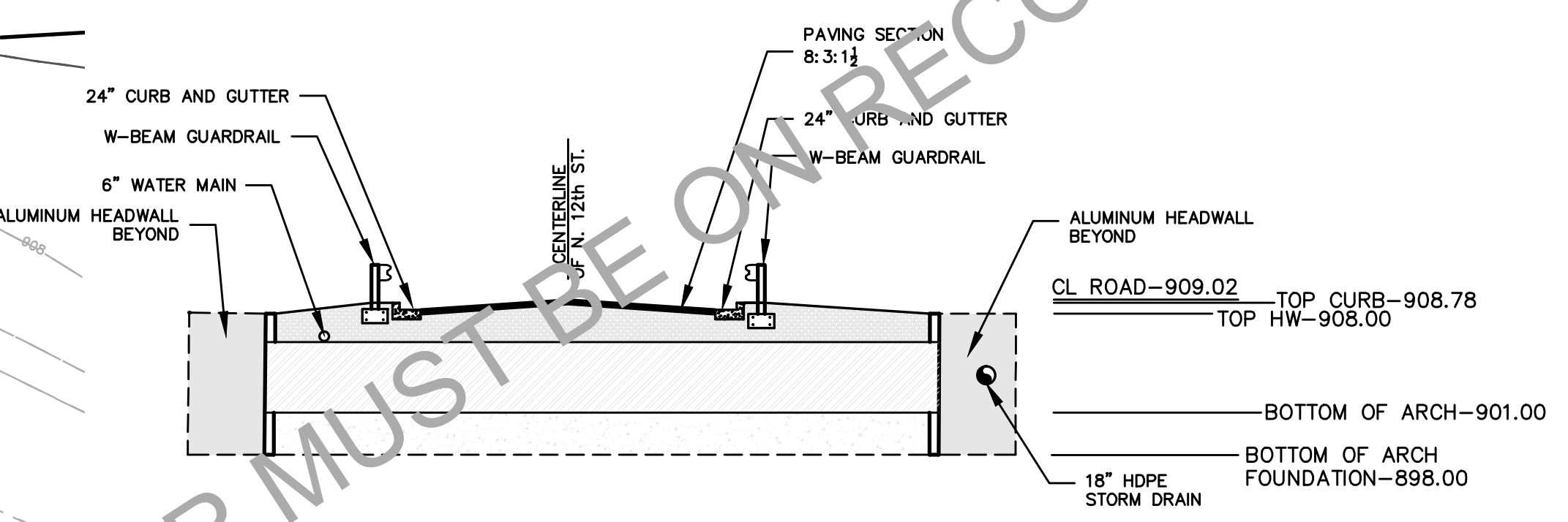
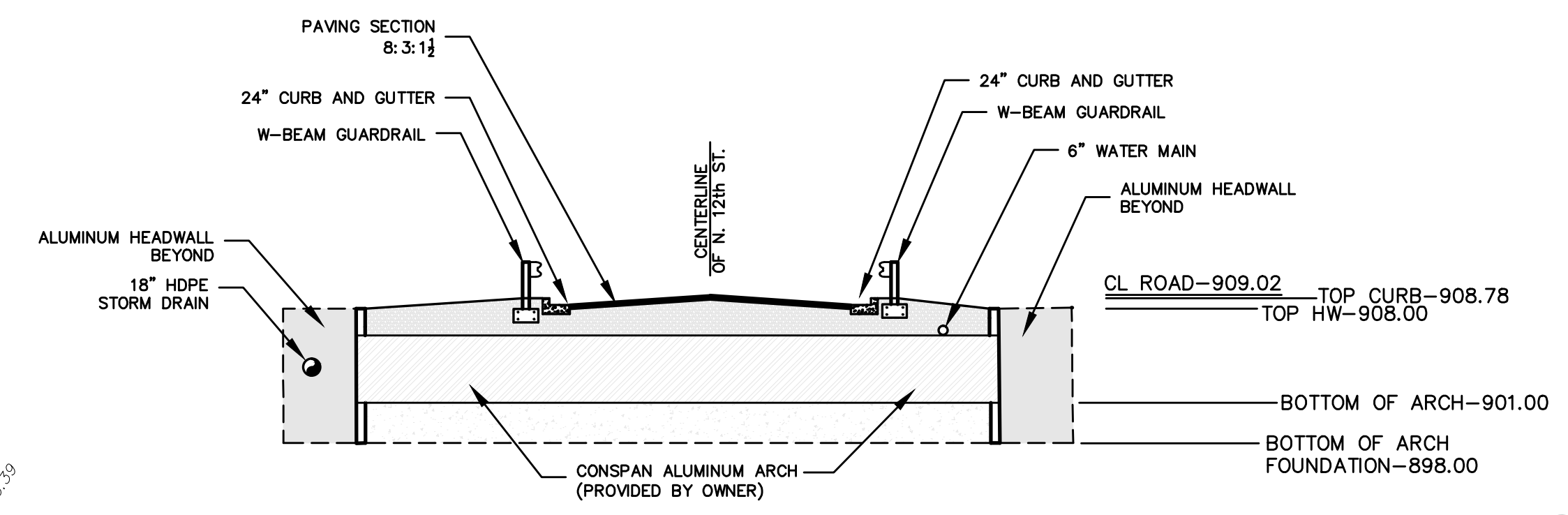
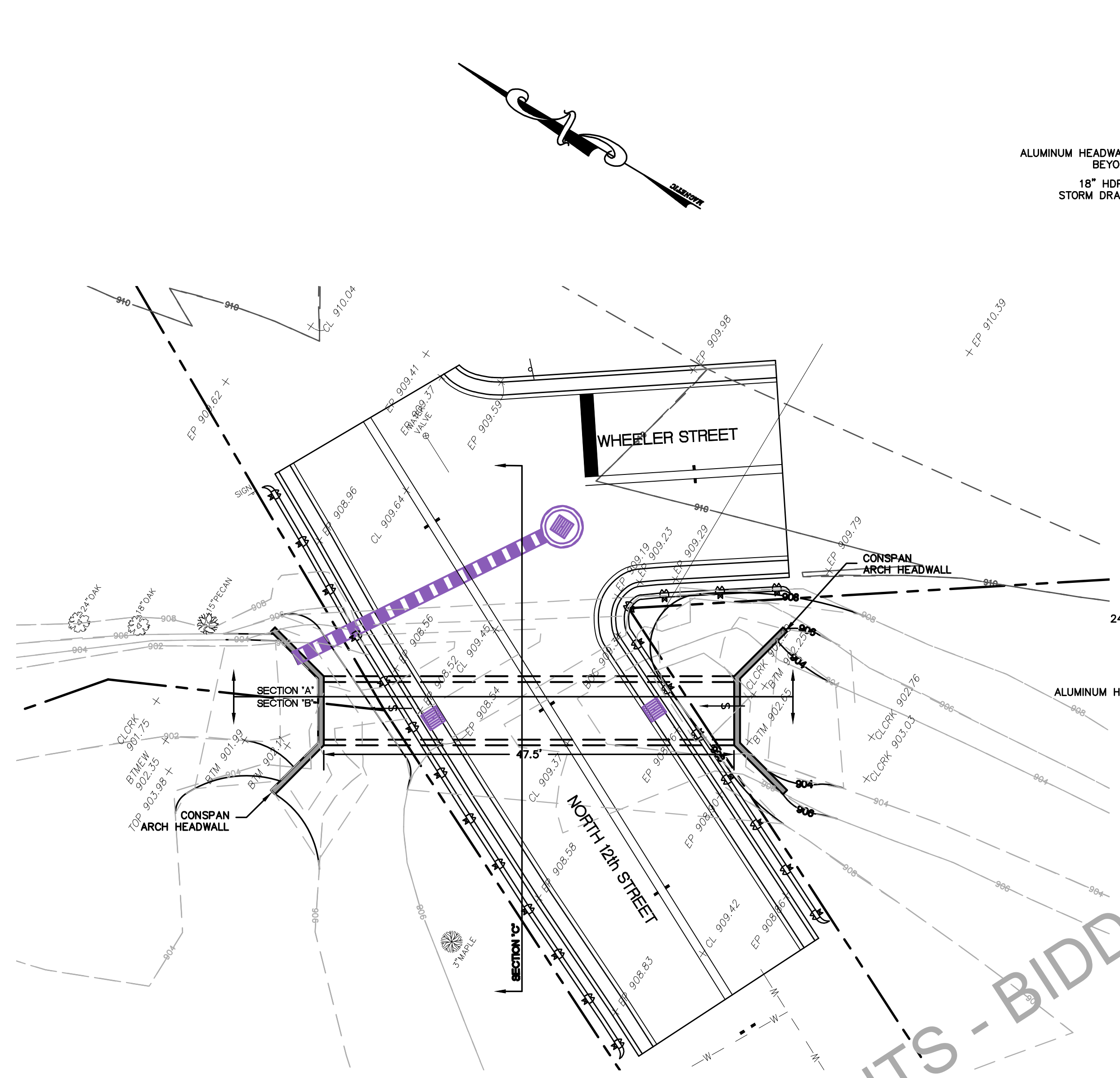
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SHEET:  
CULVERT SECTION PLAN

PE #: PEF004167



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- UTILITY NOTES**
1. CITY OF GRIFFIN SPECIFICATIONS AND DETAILS SHALL GOVERN SANITARY SEWER AND WATER MAIN CONSTRUCTION.
  2. CONTRACTOR SHALL COORDINATE ANY DISRUPTIONS TO EXISTING UTILITY SERVICES WITH ADJACENT PROPERTY OWNERS AND IS RESPONSIBLE FOR REPAIRS OF DAMAGE TO ANY EXISTING UTILITIES DURING CONSTRUCTION AT NO EXTRA COST TO THE OWNER.
  3. CONTRACTOR SHALL COMPLY TO THE FULLEST EXTENT WITH THE LATEST STANDARDS OR OSHA DIRECTIVES OR ANY OTHER AGENCY HAVING JURISDICTION FOR EXCAVATION AND TRENCHING PROCEDURES. THE CONTRACTOR SHALL SUPPORT SYSTEMS, SLOPING, BENCHING AND OTHER MEANS OF PROTECTION. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO, ACCESS AND EGRESS FROM ALL EXCAVATION AND TRENCHING. CONTRACTOR IS RESPONSIBLE TO COMPLY WITH PERFORMANCE CRITERIA FOR OSHA.
  4. THE TOP ELEVATION OF MANHOLES CONSTRUCTED IN PAVED AREAS SHALL MATCH FINISH GRADE, AND SHALL HAVE TRAFFIC-BEARING LIDS. THE TOP ELEVATION OF MANHOLES INSTALLED IN GRASSED AREAS MUST MATCH FINISHED GRADE (UNLESS OTHERWISE NOTED). ALL EXISTING MANHOLES AND UTILITY BUILDS SHALL BE ADJUSTED AS NECESSARY TO MATCH PROPOSED GRADE.
  5. EXISTING UTILITIES LOCATIONS ARE APPROXIMATE AND SHOULD BE VERIFIED FOR LOCATION AND NUMBER BY THE CONTRACTOR.
  6. CONTRACTOR TO COORDINATE INSTALLATION OF ALL UTILITIES BY OTHERS WITH HIS WORK.

**CITY OF GRIFFIN  
POINTS OF CONTACT LIST  
WATER & WASTEWATER DEPARTMENT**

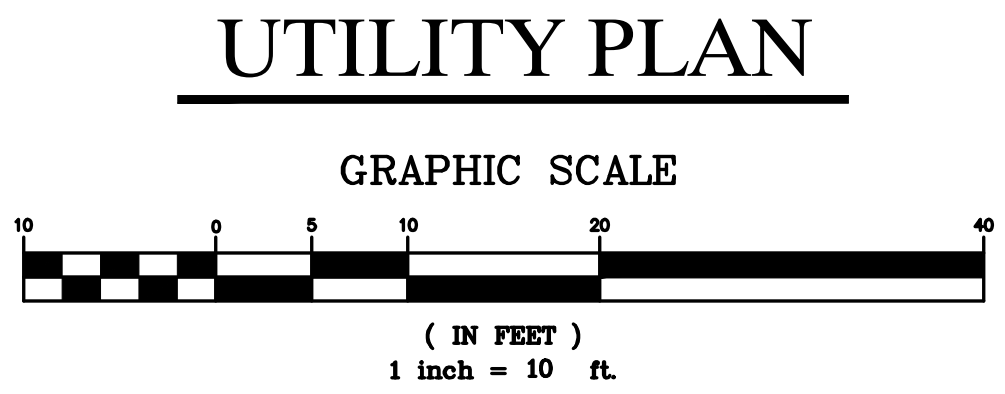
**WATER & WASTEWATER DEPUTY DIRECTOR**  
JOSEPH JOHNSON  
(470) 262-3458 OFFICE  
JJOHNSON@CITYOFGRIFFIN.COM

**WATER & WASTEWATER CONSTRUCTION  
PROJECT MANAGER**  
DOUGLAS WHITE  
(678) 692-0404 OFFICE  
(678) 435-1772  
(770) 233-9275 FAX  
DWHITE@CITYOFGRIFFIN.COM

**WATER & WASTEWATER CONSTRUCTION  
AND MAINTENANCE SUPERINTENDENT**  
DANNY PRIOR  
(770) 229-6420 OFFICE  
(404) 873-6038  
DPRYOR@CITYOFGRIFFIN.COM

**ASST. SUPERINTENDENT WASTEWATER**  
NEIL MONROE  
(770) 229-6420 OFFICE  
(404) 391-4769 24 HOUR  
NMONROE@CITYOFGRIFFIN.COM

**ASST. SUPERINTENDENT WATER**  
SHANE ANDREWS  
(770) 229-6420 OFFICE  
(678) 233-4360 24 HOUR  
SANDREWS@CITYOFGRIFFIN.COM



- WATER MAIN NOTES:**
1. NEW MAIN TO BE 6" D.I.P. CLASS 350 MEETING COG SPECIFICATIONS.
  2. BENDS TO BE M.J. WITH RETAINER GLANDS.
  3. PIPE JOINTS TO HAVE LOCKING GASKETS.
  4. CONTRACTOR TO VERIFY PIPE SIZE AND MATERIAL.

NOTE: CONTRACTOR IS RESPONSIBLE FOR ALL PERMIT AND TAP FEES.

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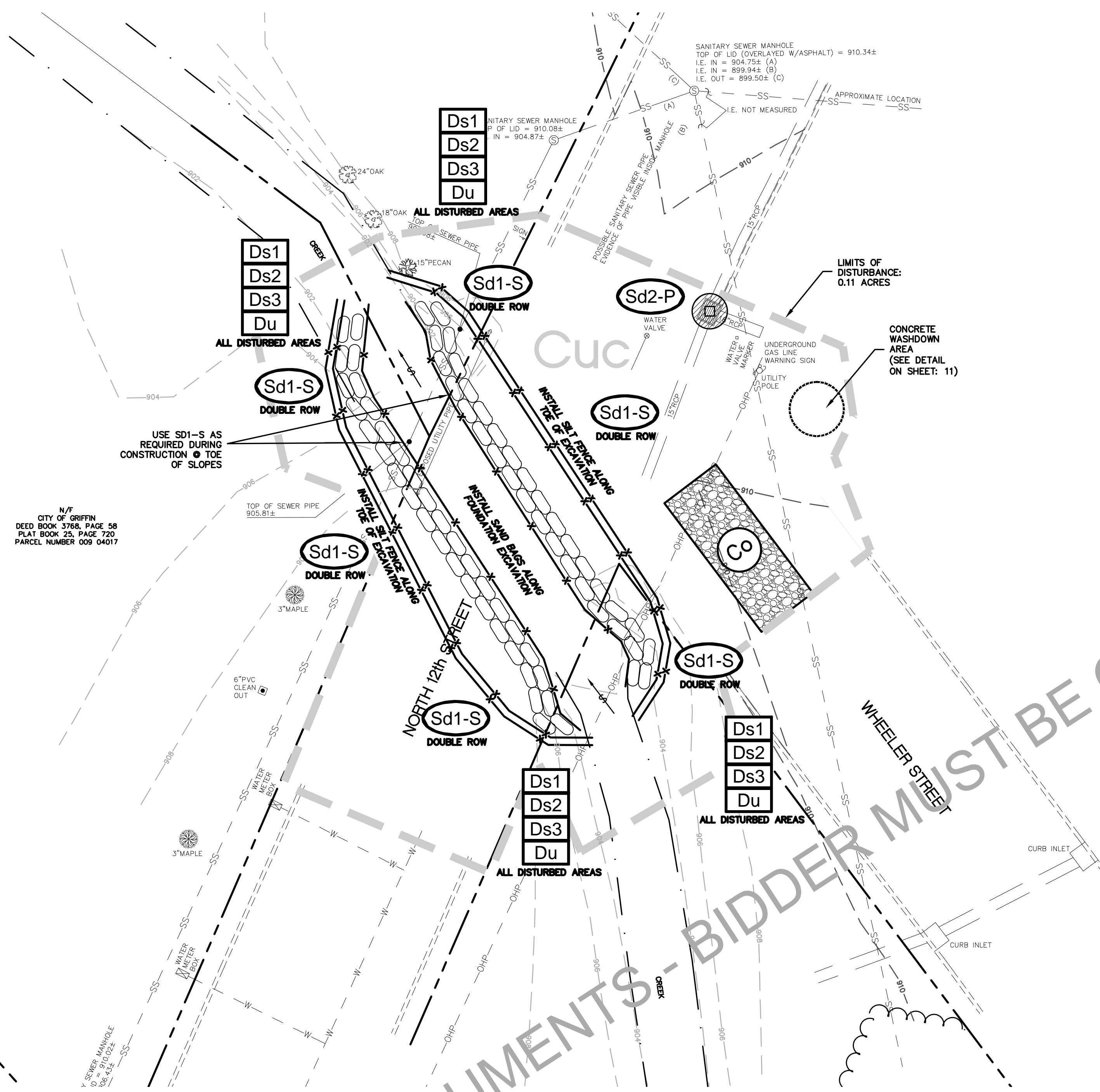
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SHEET:  
UTILITY PLAN

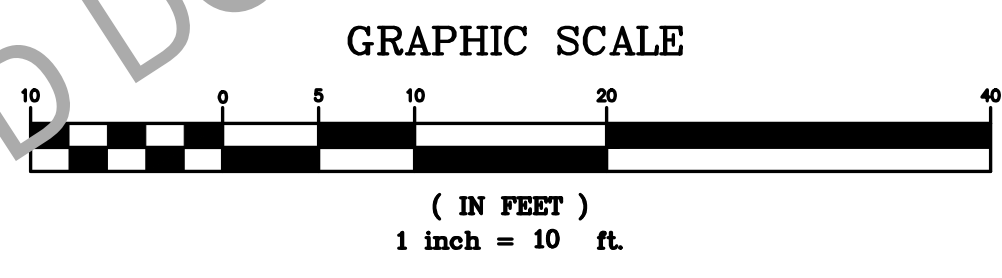
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**INITIAL EROSION & SEDIMENT CONTROL PLAN**



ACTIVITY SCHEDULE	MONTH	
	MONTH 1	MONTH 2
SEDIMENT CONTROL	█	█
DEMO.	█	█
GRADING	█	█
EROSION CONTROL	█	█
MULCHING	█	█
TEMPORARY VEGETATION	█	█
PERMANENT VEGETATION	█	█

STATES WATERS ARE LOCATED WITHIN 200' OF THIS SITE.  
 THE RECEIVING WATERS FOR THIS SITE IS CABIN CREEK.  
 TOTAL AREA OF SITE: 0.2 ACRES  
 TOTAL DISTURBED AREA: 0.11 ACRES  
 AS PER FLOOD INSURANCE RATE MAP NUMBER 13255C 0069 D DATED MAY 3rd, 2010, THIS SITE DOES NOT LIE WITHIN A FLOOD HAZARD AREA.  
 STORM WATER FROM THIS SITE DOES NOT DISCHARGE INTO AN IMPAIRED STREAM SEGMENT, OR WITHIN 1 LINEAR MILE UPSTREAM OF AND WITHIN THE SAME WATERSHED AS, ANY PORTION OF A BIOTA IMPAIRED STREAM SEGMENT.

LOCATED IN LANDLOT 129 OF THE 3rd DISTRICT, SPALDING COUNTY, GEORGIA

CuC - CECIL-URBAN LAND COMPLEX, 2 TO 10 PERCENT SLOPES

STRUCTURAL PRACTICES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Co	CONSTRUCTION EXIT			A CRUSHED STONE PAD LOCATED AT THE CONSTRUCTION SITE EXIT TO PROVIDE A PLACE FOR REMOVING MUD FROM TIRES THEREBY PROTECTING PUBLIC STREETS.
Sd1	SEDIMENT BARRIER			A BARRIER TO PREVENT SEDIMENT FROM LEAVING THE CONSTRUCTION SITE. IT MAY BE SANDBAGS, BALES OF STRAW OR HAY, BRUSH, LOGS AND POLES, GRAVEL, OR A SILT FENCE.
Sd2	INLET SEDIMENT TRAP			AN ENCLOSURE AREA CREATED BY EXCAVATING A TRENCH AS A SEDIMENT TRAP INLET. THE EXCAVATED AREA WILL BE FILLED AND STABILIZED ON COMPLETION OF CONSTRUCTION.

VEGETATIVE PRACTICES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Ds1	DISTURBED AREA STABILIZATION (WITH MULCHING ONLY)			ESTABLISHING TEMPORARY PROTECTION FOR DISTURBED AREAS WHERE SEEDINGS MAY NOT HAVE A SUITABLE GROWING SEASON TO PRODUCE AN EROSION RETARDING COVER.
Ds2	DIST. BED AREA STABILIZATION (WITH TEMP SEEDS)			ESTABLISHING A TEMPORARY VEGETATIVE COVER WITH FAST GROWING SEEDINGS ON DISTURBED AREAS.
Ds3	DISTURBED AREA STABILIZATION (WITH PERM SEEDS)			ESTABLISHING A PERMANENT VEGETATIVE COVER SUCH AS TREES, SHRUBS, WHEAT, GRASSES, OR LEGUMES ON DISTURBED AREAS.
Du	DUST CONTROL ON DISTURBED AREAS			CONTROLLING SURFACE AND AIR MOVEMENT OF DUST ON CONSTRUCTION SITE, ROADWAYS AND SIMILAR SITES.

E&S NOTES

- A COPY OF THE APPROVED CONSTRUCTION PLANS SHALL BE KEPT ON THE JOB SITE AT ALL TIMES THAT CONSTRUCTION IS UNDER WAY.
- IT IS THE DEVELOPER'S RESPONSIBILITY TO COMPLY WITH ALL STATE AND FEDERAL LAWS AND REGULATIONS THAT APPLY TO THE PROJECT.
- INFORMATION REGARDING UNDERGROUND UTILITIES ON THESE PLANS IS NOT GUARANTEED AS TO ACCURACY OR COMPLETENESS. PRIOR TO BEGINNING WORK, THE CONTRACTOR SHALL REQUEST A FIELD LOCATION THROUGH THE UTILITY PROTECTION CENTER AND ANY UTILITY OWNERS THOUGHT TO HAVE FACILITIES IN THE AREA. THE CONTRACTOR SHALL PROMPTLY COMPARE THESE FIELD-MARKED LOCATIONS WITH THE PROJECT PLANS AND THEN NOTIFY THE DESIGN PROFESSIONAL AND, IF NECESSARY, THE CITY OF ANY ANTICIPATED PROBLEMS OR NEED FOR CHANGES.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO EXCAVATE OR COORDINATE WITH THE UTILITY OWNER TO EXCAVATE FOR THE PURPOSE OF DETERMINING EXACT ELEVATIONS OR LOCATIONS AT UTILITY CROSSINGS AND OTHER CRITICAL LOCATIONS WELL IN ADVANCE OF THE WORK.
- IT IS THE DEVELOPER'S RESPONSIBILITY TO NOTIFY CITY OFFICIALS FOR ALL REQUIRED INSPECTIONS. 48 HOUR ADVANCE NOTIFICATION IS REQUIRED PRIOR TO INSPECTION BY THE CITY.
- ALL PERIMETER SEDIMENT BARRIERS, BARRIERS AT CLEARING LIMITS, AND SILT/DETENTION PONDS SHALL BE CONSTRUCTED PRIOR TO ISSUANCE OF GRADING PERMIT.
- THE REMAINING EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO OR CONCURRENT WITH LAND DISTURBING ACTIVITIES.
- EROSION AND SEDIMENTATION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. ADDITIONAL EROSION AND SEDIMENTATION CONTROL MEASURES AND PRACTICES WILL BE INSTALLED IF DEEMED NECESSARY BY ONSITE INSPECTION.
- THE DISTURBED AREA AND THE DURATION OF EXPOSURE TO EROSION ELEMENTS SHALL BE KEPT TO A PRACTICABLE MINIMUM. TEMPORARY VEGETATION OR MULCHING SHALL BE EMPLOYED TO PROTECT EXPOSED CRITICAL AREAS DURING CONSTRUCTION.
- PERMANENT VEGETATION SHALL BE ESTABLISHED AS SOON AS PRACTICABLE.
- STREAM BUFFERS ARE MEASURED FROM THE POINT WHERE THE VEGETATION HAS BEEN WRESTED BY THE NORMAL STREAM FLOW. THE BUFFER AREA SHALL REMAIN UNDISTURBED, EXCEPT IN THE BRIDGE CONSTRUCTION ZONE.
- ALL CONSTRUCTION SHALL COMPLY WITH THE MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA, LATEST EDITION.
- MAINTENANCE OF ALL SOIL EROSION AND SEDIMENTATION CONTROL PRACTICES, WHETHER TEMPORARY OR PERMANENT, SHALL BE AT ALL TIMES THE RESPONSIBILITY OF THE PROPERTY OWNER.
- ALL CONSTRUCTION SHALL COMPLY WITH THE MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA, LATEST EDITION.
- MAINTENANCE OF ALL SOIL EROSION AND SEDIMENTATION CONTROL PRACTICES, WHETHER TEMPORARY OR PERMANENT, SHALL BE AT ALL TIMES THE RESPONSIBILITY OF THE CONTRACTOR.
- ADDITIONAL E&S MEASURES MAYBE REQUIRED DURING CONSTRUCTION SUCH AS SILT FENCE, HAY BALES, AND SAND BAGS AS DIRECTED BY THE INSPECTOR OR ENGINEER.

E&S NOTES:  
 1. REMOVE SILT FENCE WHEN FOUNDATION IS COMPLETE AND BACKFILL IS READY TO BE INSTALLED.

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 CONSULTING GROUP

118 n. expressway griffin, georgia 30223  
 phone (770) 412-7700 fax (770) 412-7744

CONSTRUCTION PLANS FOR

**12th STREET CULVERT REPLACEMENT**

LOCATED IN LANDLOT 129 OF THE 3rd DISTRICT, SPALDING COUNTY

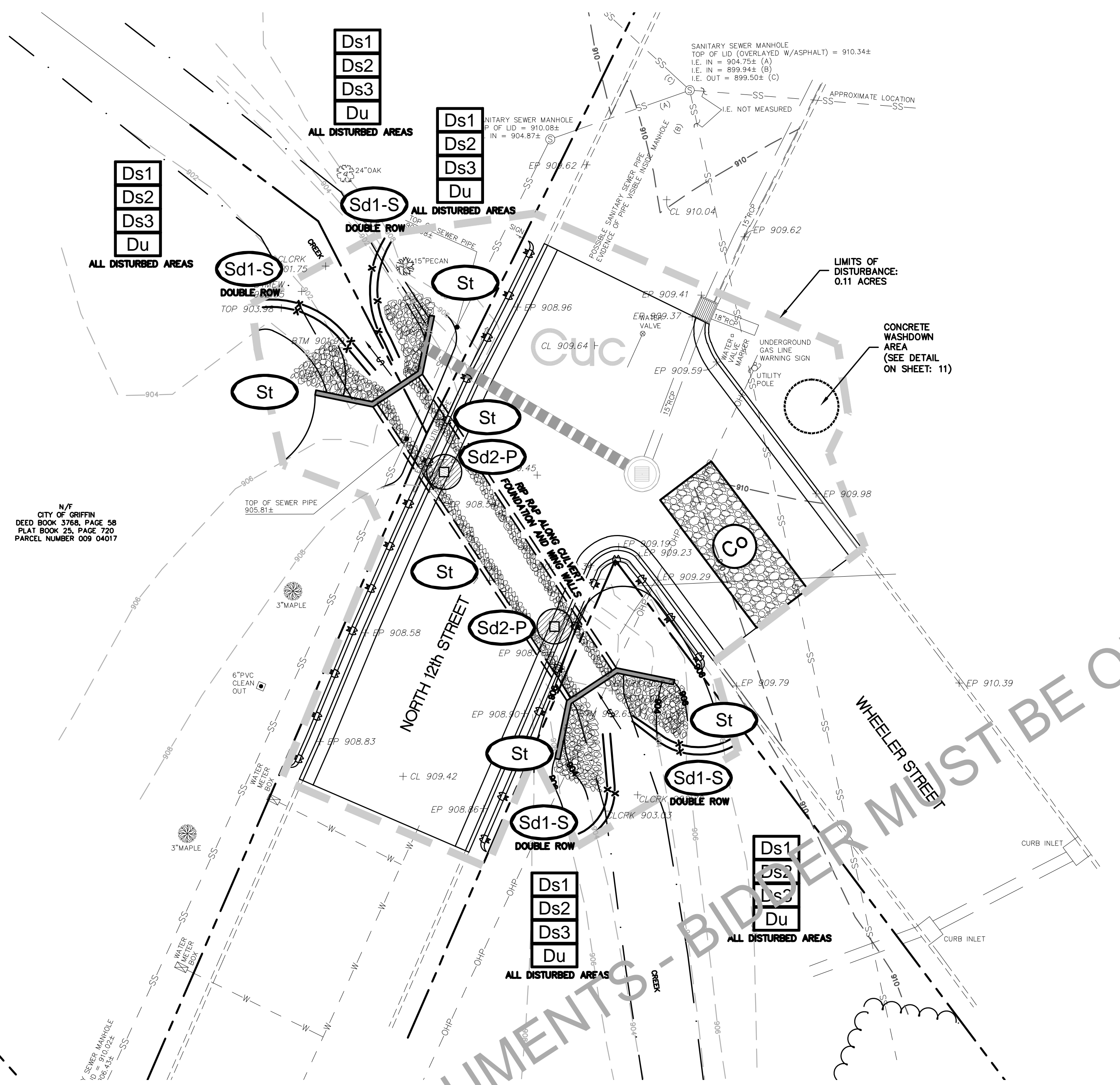
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SHEET:  
 INITIAL EROSION CONTROL PLAN

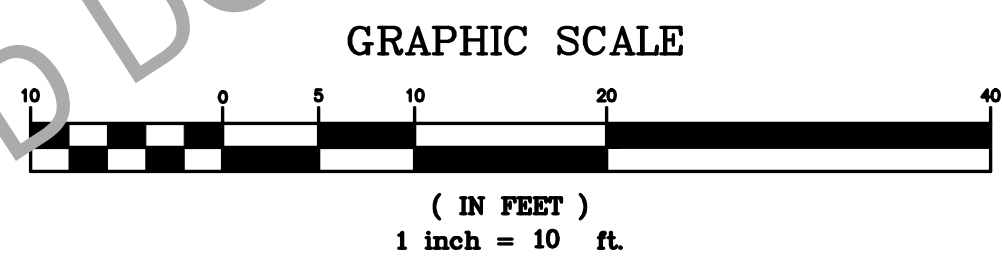
PE #: PEF004167

REGISTERED PROFESSIONAL ENGINEER  
 CHARLES N. PENNY  
 No. 20048  
 GEORGIA  
 GSWCC LEVEL II CERT. # 0000010472

Project No. 16054.00 Issue Date: JUNE 2017  
 Drawn By: DMG Checked By: CNP



**FINAL EROSION & SEDIMENT CONTROL PLAN**



	ACTIVITY SCHEDULE	
	MONTH 1	MONTH 2
SEDIMENT CONTROL		
DEMO.		
GRADING		
EROSION CONTROL		
MULCHING		
TEMPORARY VEGETATION		
PERMANENT VEGETATION		

STATES WATERS ARE LOCATED WITHIN 200' OF THIS SITE.  
 THE RECEIVING WATERS FOR THIS SITE IS CABIN CREEK.  
 TOTAL AREA OF SITE: 0.2 ACRES  
 TOTAL DISTURBED AREA: 0.11 ACRES  
 AS PER FLOOD INSURANCE RATE MAP NUMBER 13255C 0069 D DATED MAY 3rd, 2010, THIS SITE DOES NOT LIE WITHIN A FLOOD HAZARD AREA.  
 STORM WATER FROM THIS SITE DOES NOT DISCHARGE INTO AN IMPAIRED STREAM SEGMENT, OR WITHIN 1 LINEAR MILE UPSTREAM OF AND WITHIN THE SAME WATERSHED AS, ANY PORTION OF A BIOTA IMPAIRED STREAM SEGMENT.

LOCATED IN LANDLOT 129 OF THE 3rd DISTRICT, SPALDING COUNTY, GEORGIA

CuC - CECIL-URBAN LAND COMPLEX, 2 TO 10 PERCENT SLOPES

**STRUCTURAL PRACTICES**

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Co	CONSTRUCTION EXIT			A CRUSHED STONE PAD LOCATED AT THE CONSTRUCTION SITE EXIT TO PROVIDE A PLACE FOR REMOVING MUD FROM TIRES THEREBY PROTECTING PUBLIC STREETS.
Sd1	SEDIMENT BARRIER			A BARRIER TO PREVENT SEDIMENT FROM LEAVING THE CONSTRUCTION SITE. IT MAY BE MADE OF STRAW OR HAY, BRUSH, LOGS AND POLES, GRAVEL, OR A SILT FENCE.
Sd2	INLET SEDIMENT TRAP			AN IMPROVED AREA CREATED BY EXCAVATING AROUND AN EXISTING DRAIN DROP INLET. THE EXCAVATED AREA WILL BE FILLED AND STABILIZED ON COMPLETION OF CONSTRUCTION.
St	STORMWATER OUTLET PROTECTION			A PAVED OR STONE SURFACE OF R/O RAP CHANNEL AT THE OUTLET OF A STORM DRAIN SYSTEM PREVENTING EROSION FROM THE CONCENTRATED RUNOFF.

**VEGETATIVE PRACTICES**

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Ds1	DISTURBED AREA STABILIZATION (WITH TURF ONLY)			ESTABLISHING TEMPORARY PROTECTION FOR DISTURBED AREAS WHERE SEEDING MAY NOT HAVE A SUITABLE GROWING SEASON TO PRODUCE AN EROSION RETARDING COVER.
Ds2	DISTURBED AREA STABILIZATION (WITH TURF SEEDING)			ESTABLISHING A TEMPORARY VEGETATIVE COVER WITH FAST GROWING SEEDINGS ON DISTURBED AREAS.
Ds3	DISTURBED AREA STABILIZATION (WITH PERM SEEDING)			ESTABLISHING A PERMANENT VEGETATIVE COVER SUCH AS TREES, SHRUBS, WHEAT, GRASSES OR LEGUMES ON DISTURBED AREAS.
Du	DUST CONTROL ON DISTURBED AREAS			CONTROLLING SURFACE AND AIR MOVEMENT OF DUST ON CONSTRUCTION SITES, ROADWAYS AND SIMILAR SITES.

- E&S NOTES**
- A COPY OF THE APPROVED CONSTRUCTION PLANS SHALL BE KEPT ON THE JOB SITE AT ALL TIMES THAT CONSTRUCTION IS UNDER WAY.
  - IT IS THE DEVELOPER'S RESPONSIBILITY TO COMPLY WITH ALL STATE AND FEDERAL LAWS AND REGULATIONS THAT APPLY TO THE PROJECT.
  - INFORMATION REGARDING UNDERGROUND UTILITIES ON THESE PLANS IS NOT GUARANTEED AS TO ACCURACY OR COMPLETENESS. PRIOR TO BEGINNING WORK, THE CONTRACTOR SHALL REQUEST A FIELD LOCATION THROUGH THE UTILITY PROTECTION CENTER AND ANY UTILITY OWNERS THOUGHT TO HAVE FACILITIES IN THE AREA. THE CONTRACTOR SHALL PROMPTLY COMPARE THESE FIELD-MARKED LOCATIONS WITH THE PROJECT PLANS AND THEN NOTIFY THE DESIGN PROFESSIONAL AND, IF NECESSARY, THE CITY OF ANY ANTICIPATED PROBLEMS OR NEED FOR CHANGES.
  - IT IS THE CONTRACTOR'S RESPONSIBILITY TO EXCAVATE OR COORDINATE WITH THE UTILITY OWNER TO EXCAVATE FOR THE PURPOSE OF DETERMINING EXACT ELEVATIONS OR LOCATIONS AT UTILITY CROSSINGS AND OTHER CRITICAL LOCATIONS WELL IN ADVANCE OF THE WORK.
  - IT IS THE DEVELOPER'S RESPONSIBILITY TO NOTIFY CITY OFFICIALS FOR ALL REQUIRED INSPECTIONS. 48 HOUR ADVANCE NOTIFICATION IS REQUIRED PRIOR TO INSPECTION BY THE CITY.
  - ALL PERIMETER SEDIMENT BARRIERS, BARRIERS AT CLEARING LIMITS, AND SILT/RETENTION PONDS SHALL BE CONSTRUCTED PRIOR TO ISSUANCE OF GRADING PERMIT.
  - THE REMAINING EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO OR CONCURRENT WITH LAND DISTURBING ACTIVITIES.
  - EROSION AND SEDIMENTATION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. ADDITIONAL EROSION AND SEDIMENTATION CONTROL MEASURES AND PRACTICES WILL BE INSTALLED IF DEEMED NECESSARY BY ONSITE INSPECTION.
  - THE DISTURBED AREA AND THE DURATION OF EXPOSURE TO EROSION ELEMENTS SHALL BE KEPT TO A PRACTICABLE MINIMUM. TEMPORARY VEGETATION OR MULCHING SHALL BE EMPLOYED TO PROTECT EXPOSED CRITICAL AREAS DURING CONSTRUCTION.
  - PERMANENT VEGETATION SHALL BE ESTABLISHED AS SOON AS PRACTICABLE.
  - STREAM BUFFERS ARE MEASURED FROM THE POINT WHERE THE VEGETATION HAS BEEN WRESTED BY THE NORMAL STREAM FLOW. THE BUFFER AREA SHALL REMAIN UNDISTURBED, EXCEPT IN THE BRIDGE CONSTRUCTION ZONE.
  - ALL CONSTRUCTION SHALL COMPLY WITH THE MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA, LATEST EDITION.
  - MAINTENANCE OF ALL SOIL EROSION AND SEDIMENTATION CONTROL PRACTICES, WHETHER TEMPORARY OR PERMANENT, SHALL BE AT ALL TIMES THE RESPONSIBILITY OF THE PROPERTY OWNER.
  - ALL CONSTRUCTION SHALL COMPLY WITH THE MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA, LATEST EDITION.
  - MAINTENANCE OF ALL SOIL EROSION AND SEDIMENTATION CONTROL PRACTICES, WHETHER TEMPORARY OR PERMANENT, SHALL BE AT ALL TIMES THE RESPONSIBILITY OF THE CONTRACTOR.
  - ADDITIONAL E&S MEASURES MAYBE REQUIRED DURING CONSTRUCTION SUCH AS SILT FENCE, HAY BALES, AND SAND BAGS AS DIRECTED BY THE INSPECTOR OR ENGINEER.

- E&S NOTES:**
- REMOVE SILT FENCE WHEN GRASSING AND PAVING IS ESTABLISHED.
  - REMOVE INLET PROTECTION WHEN PAVING IS ESTABLISHED.
  - REMOVE CONSTRUCTION EXIT ONCE GRADING IS COMPLETE AND ASPHALT IS INSTALLED.

No.	Revisions:	Date

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CONSTRUCTION PLANS FOR  
**12th STREET CULVERT REPLACEMENT**  
 LOCATED IN LANDLOT 129 OF THE 3rd DISTRICT, SPALDING COUNTY

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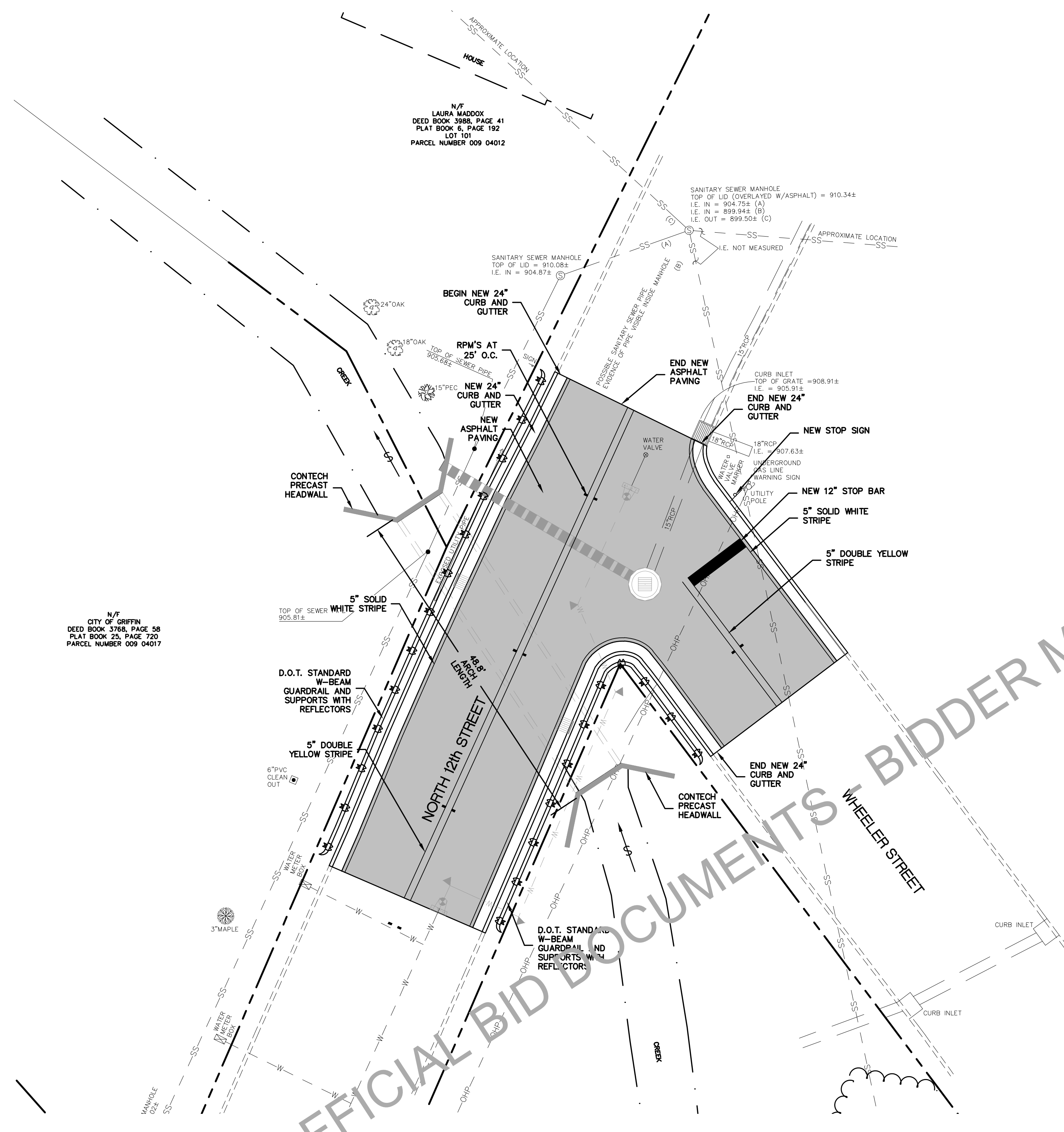
SHEET:  
**FINAL EROSION CONTROL PLAN**

PE #: PEF004167

REGISTERED PROFESSIONAL ENGINEER  
 No. 20048  
 CHARLES N. PENNY  
 GSWCC LEVEL II CERT. # 0000010472

Project No. 16054.00 Issue Date: JUNE 2017  
 Drawn By: DMG Checked By: CNP

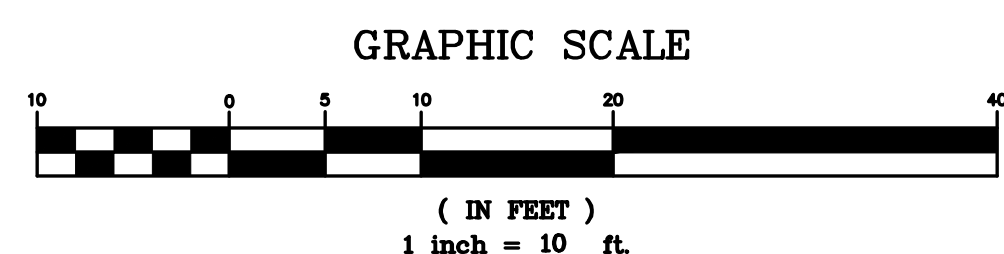




N/T  
CITY OF GRIFFIN  
DEED BOOK 3768, PAGE 38  
PLAT BOOK 25, PAGE 720  
PARCEL NUMBER 009 04017

N/T  
LAURA MADDOX  
DEED BOOK 3988, PAGE 41  
PLAT BOOK 6, PAGE 192  
LOT 101  
PARCEL NUMBER 009 04012

### SIGNAGE AND PAVEMENT MARKING PLAN



#### GENERAL NOTES

- CONTRACTOR IS TO COMPLY WITH ALL LOCAL BUILDING CODES AND REGULATIONS WHICH ARE PRESENTLY IN EFFECT.
- THE CONTRACTOR IS SPECIFICALLY CAUTIONED ABOUT THE LOCATION AND/OR ELEVATIONS OF EXISTING UTILITIES SHOWN ON THIS DRAWING. THEY ARE BASED UPON RECORDS FROM VARIOUS UTILITY COMPANIES, DEEDS AND PLATS OF RECORD, AND WHERE POSSIBLE, ACTUAL FIELD MEASUREMENTS. THIS INFORMATION IS NOT TO BE TAKEN AS EXACT NOR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 24 HOURS PRIOR TO ANY EXCAVATION TO REQUEST EXACT FIELD LOCATIONS OF RESPECTIVE UTILITIES. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO FIELD VERIFY THE EXACT LOCATION OF EXISTING UTILITIES WHICH MAY CONFLICT WITH PROPOSED IMPROVEMENTS. UPC# 1-800-282-7411
- CONTRACTOR SHALL ASSURE THAT ALL FINAL INSPECTIONS ARE MADE.
- A COPY OF THE APPROVED CONSTRUCTION PLANS SHALL BE KEPT ON THE JOB SITE AT ALL TIMES THAT CONSTRUCTION IS UNDER WAY.
- IT IS THE DEVELOPER'S RESPONSIBILITY TO COMPLY WITH ALL STATE AND FEDERAL LAWS AND REGULATIONS THAT APPLY TO THE PROJECT.
- IT IS THE RESPONSIBILITY OF THE DEVELOPER TO ACQUIRE ANY OFFSITE EASEMENTS BEFORE CONSTRUCTION BEGINS. PERMIT ISSUANCE SHALL OCCUR AFTER ALL OFF-SITE EASEMENTS ARE OBTAINED. ANY OFF-SITE EASEMENTS FOR PUBLIC AND UTILITIES USE SHALL BE OBTAINED IN THE NAME OF THE CITY OF GRIFFIN.
- GRADING SHALL COMPLETED TO SUBGRADE ELEVATION. IT SHOULD BE NOTED THAT FINISH WITH SURFACE GRADES ARE SHOWN ON THIS PLAN, AND THE CONTRACTOR SHALL MAKE ALLOWANCES FOR PAVEMENT, STONE, AND SLAB THICKNESSES.
- ALL FINISHED GRADING AND PAVING SHALL HAVE POSITIVE DRAINAGE.
- ALL PERIMETER SEDIMENT BARRIERS, BARRIERS AT CLEARING LIMITS SHALL BE CONSTRUCTED PRIOR TO ISSUANCE OF GRADING PERMIT.
- THE REMAINING EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO OR CONCURRENT WITH LAND DISTURBING ACTIVITIES.
- EROSION AND SEDIMENTATION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. ADDITIONAL EROSION AND SEDIMENTATION CONTROL MEASURES AND PRACTICES WILL BE INSTALLED IF DEEMED NECESSARY BY ONSITE INSPECTION.
- THE DISTURBED AREA AND THE DURATION OF EXPOSURE TO EROSION ELEMENTS SHALL BE KEPT TO A PRACTICABLE MINIMUM. TEMPORARY VEGETATION OR MULCHING SHALL BE EMPLOYED TO PROTECT EXPOSED CRITICAL AREAS DURING CONSTRUCTION.
- PERMANENT VEGETATION SHALL BE ESTABLISHED AS SOON AS PRACTICABLE.
- ALL CONSTRUCTION SHALL COMPLY WITH THE MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA, LATEST EDITION.
- MAINTENANCE OF ALL SOIL EROSION AND SEDIMENTATION CONTROL PRACTICES, WHETHER TEMPORARY OR PERMANENT, SHALL BE AT ALL TIMES THE RESPONSIBILITY OF THE PROPERTY OWNER.

#### SITE NARRATIVE

- BOUNDARY AND TOPOGRAPHICAL DATA TAKEN FROM INFORMATION PREPARED BY S.L. COLWELL AND ASSOCIATES 265 CRAWFORD ROAD, BARNESVILLE, GEORGIA 30204
- PROPERTY LOCATED IN LAND LOT 129 OF THE 3rd DISTRICT, SPALDING COUNTY, GEORGIA.
- PROPERTY OWNER: CITY OF GRIFFIN  
CONTACT: CHRIS WALKER  
SITE ZONED: N/A  
SITE USAGE: DRAINAGE CULVERT  
BUILDING SETBACKS: N/A
- ALL CONSTRUCTION SHALL CONFORM TO THE CITY OF GRIFFIN STANDARD SPECIFICATIONS AND REGULATIONS.
- PERSONS USING THIS DRAWING SHOULD CONTACT LOCAL UTILITY COMPANIES & MUNICIPALITIES FOR EXACT LOCATIONS OF UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION.
- DO NOT SCALE THIS DRAWING AS IT IS A REPRODUCTION AND SUBJECT TO DISTORTION.
- OWNER/DEVELOPER CONTACT: CHRIS WALKER  
(770) 229-8611  
100 SOUTH HILL STREET  
GRIFFIN, GEORGIA 30224

NOT OFFICIAL BID DOCUMENTS - BIDDER MUST BE ON RECORD WITH ISSUING OFFICE

**PARAGON**  
CONSULTING GROUP

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phone (770) 412-7700 fax (770) 412-7744

CONSTRUCTION PLANS FOR

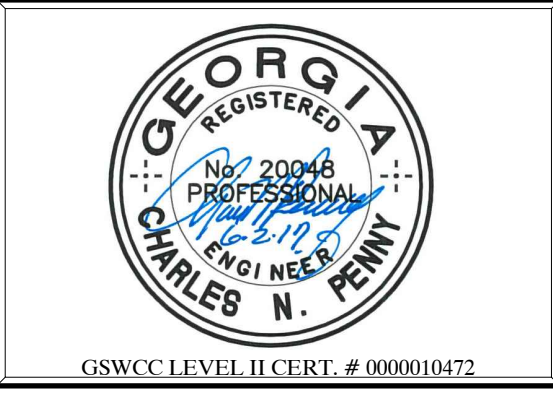
## 12th STREET CULVERT REPLACEMENT

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SHEET:  
SIGNAGE AND PAVEMENT MARKING PLAN

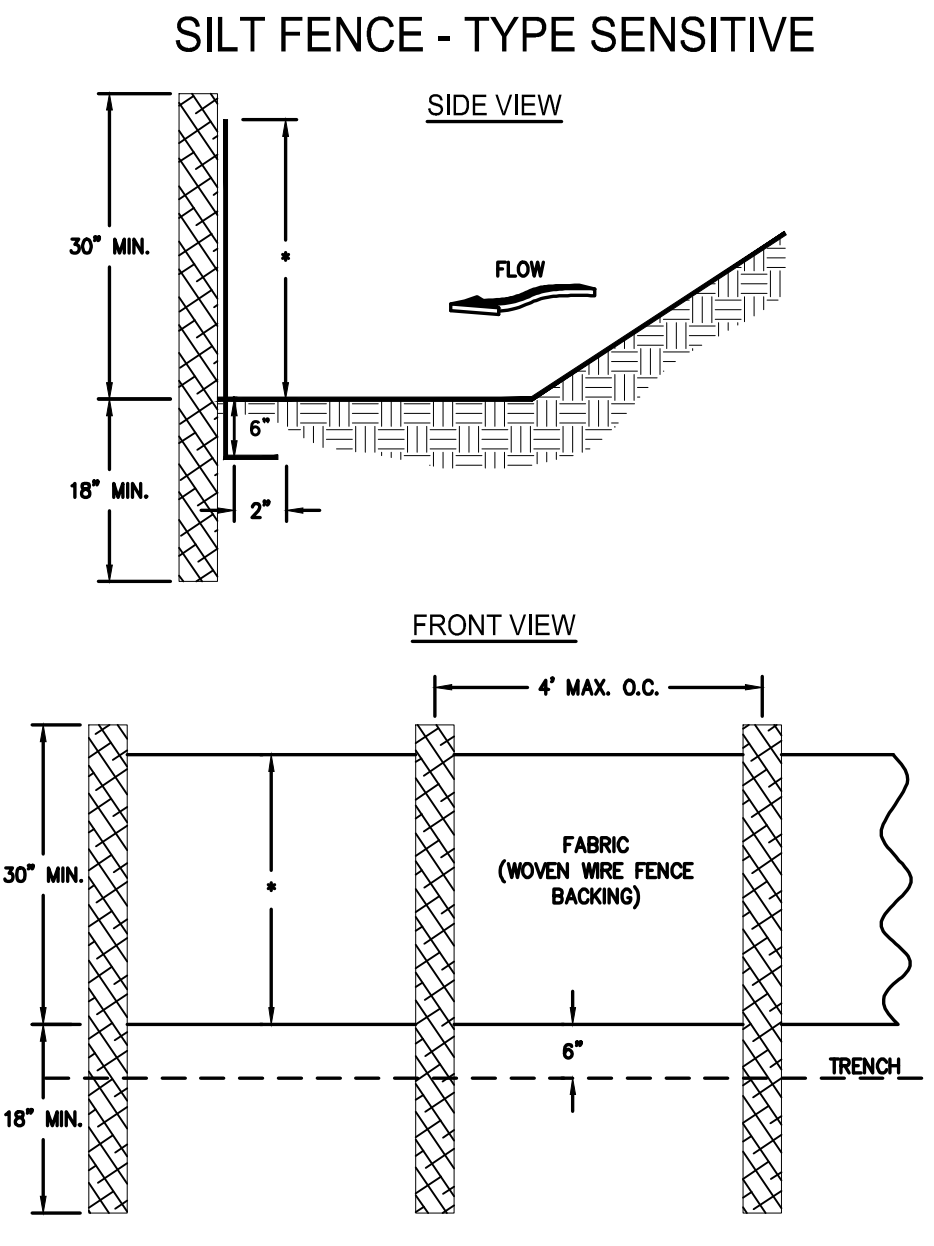
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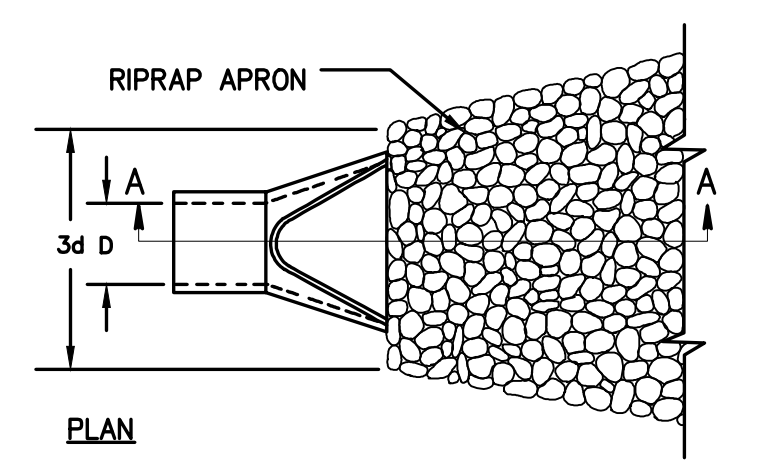
No.	Revisions:	Date

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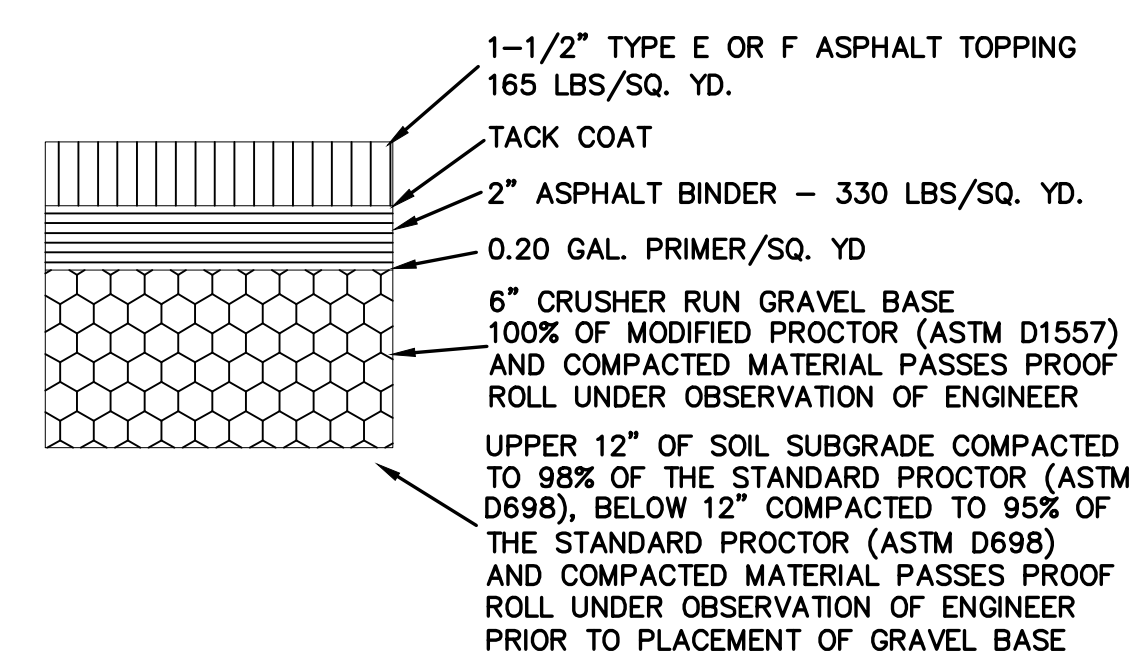
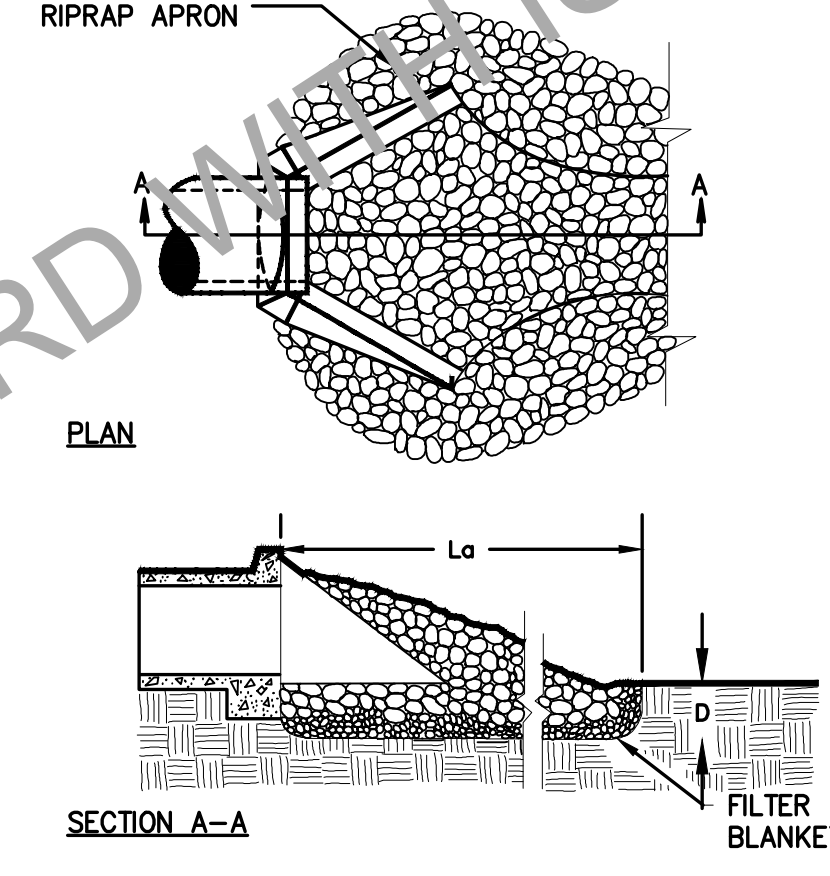
- NOTES:**
1. USE STEEL OR WOOD POSTS OR AS SPECIFIED BY THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.
  2. HEIGHT (H) IS TO BE SHOWN ON THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.

### PIPE OUTLET TO FLAT AREA -- NO WELL DEFINED CHANNEL



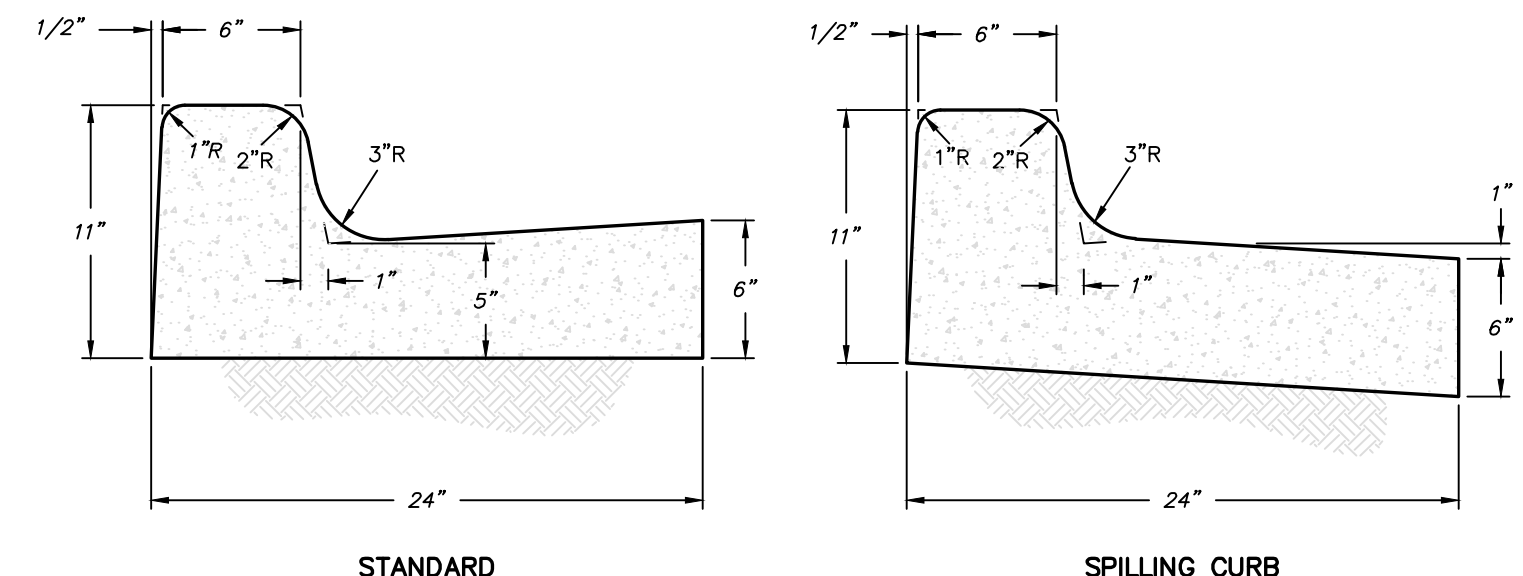
- NOTES:**
1.  $L_a$  IS THE LENGTH OF THE RIPRAP APRON.
  2.  $D = 1.5$  TIMES THE MAXIMUM STONE DIAMETER BUT NOT LESS THAN 6".
  3. IN A WELL-DEFINED CHANNEL, EXTEND THE APRON UP THE CHANNEL BANKS TO AN ELEVATION OF 6" ABOVE THE MAXIMUM TAILWATER DEPTH OR TO THE TOP OF THE BANK (WHICHEVER IS LESS).
  4. A FILTER BLANKET OR FILTER FABRIC SHOULD BE INSTALLED BETWEEN THE RIPRAP AND THE SOIL FOUNDATION.

### PIPE OUTLET TO WELL DEFINED CHANNEL



COMPACT UPPER 2 FEET OF SUBGRADES CONSISTING OF APPROVED FILL IN 6" COMPACTED LIFTS.

### PAVEMENT SECTIONS DETAIL



### CONSTRUCTION NOTES

1. 1/2" PREFORMED EXPANSION JOINTS REQUIRED AT ALL STRUCTURES & CURB RETURNS.
2. MAXIMUM DISTANCE BETWEEN EXPANSION JOINTS = 40.0'.
3. DISTANCE BETWEEN DUMMY JOINTS = 10.0'.
4. CONCRETE STRENGTH = 3000 PSI, SLUMP = 2", FINISH SHALL BE SMOOTHED & EVENED WITH A WOODEN FLOAT.
5. OTHER CURB & GUTTER SECTIONS WILL BE EVALUATED AS APPROPRIATE BY THE ENGINEER.

### CURB & GUTTER

No.	Revisions:	Date

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CONSTRUCTION PLANS FOR

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SHEET:  
EROSION CONTROL  
DETAILS

PE #: PEF004167

REGISTERED PROFESSIONAL ENGINEER  
No. 20048  
CHARLES N. PENNY  
GSWCC LEVEL II CERT. # 1000010472

Project No. 16054.00	Issue Date: JUNE 2017
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Ds2 DISTURBED AREA STABILIZATION (WITH TEMPORARY SEEDING)

Table with columns: SPECIES, BROADCAST RATES 2/ - PLS 3/ PER ACRE, 1000 SQ. FT., RESOURCE AREA, PLANTING RATES BY RESOURCE AREA PLANTING DATES (J, F, M, A, M, J, J, A, S, O, N, D), REMARKS. Includes species like MILLET, PEARL (PENNESETUM GLAUCUM) and SUDANGRASS (SORGHUM SUDANESE).

SPECIFICATIONS

- A. GRADING AND SHAPING
1. EXCESSIVE WATER RUNOFF MUST BE CONTROLLED BY PLANNED AND INSTALLED EROSION CONTROL PRACTICES SUCH AS CLOSED DRAINS, DITCHES, DIKES, DIVERSIONS, SEDIMENT BASINS AND OTHERS.
B. SEEDBED PREPARATION
1. WHEN A HYDRAULIC SEEDER IS USED, SEEDBED PREPARATION IS NOT REQUIRED.

\* REVISED 7/01 PER 5TH EDITION OF MANUAL FOR EROSION & SEDIMENT CONTROL IN GEORGIA.

Ds3 DISTURBED AREA STABILIZATION (WITH PERMANENT SEEDING)

Table with columns: SPECIES, BROADCAST RATES 2/ - PLS 3/ PER ACRE, 1000 SQ. FT., RESOURCE AREA, PLANTING RATES BY RESOURCE AREA PLANTING DATES (J, F, M, A, M, J, J, A, S, O, N, D), REMARKS. Includes species like BERMUDA, COMMON (CYNODON DACTYLON) and FESCUE, TALL (FESTUCA ARUNDINACEA).

SPECIFICATIONS

- A. GRADING AND SHAPING
1. GRADING AND SHAPING IS NOT NORMALLY REQUIRED WHERE HYDRAULIC SEEDING AND FERTILIZING EQUIPMENT IS TO BE USED.
B. SEEDBED PREPARATION
1. SEEDBED PREPARATION MAY NOT BE REQUIRED WHERE HYDRAULIC SEEDING AND FERTILIZING EQUIPMENT IS TO BE USED.

\* REVISED 7/01 PER 5TH EDITION OF MANUAL FOR EROSION & SEDIMENT CONTROL IN GEORGIA.

FERTILIZER RATES

Table with columns: SPECIES, YEARS TO APPLY FERTILIZER, FERTILIZER RATES - POUNDS PER ACRE (N, P2O5, K2O, N TOP-DRESSING). Lists various grass species and their corresponding fertilizer requirements.

AGRICULTURAL LIME RATES

ONE OR TWO TONS PER ACRE OR AS INDICATED BY SOIL TESTING.

MULCHING

DRY STRAW MULCH AT A RATE OF TWO TONS PER ACRE FOR PERMANENT VEGETATION WITHIN 24 HOURS AFTER SEEDING.

Ds1 DISTURBED AREA STABILIZATION (WITH MULCHING ONLY)

Table with columns: MATERIAL, DEPTH. Lists materials like DRY STRAW OR GRASS HAY and WOOD WASTE with their required depths.

SEE DS1 SPECIFICATIONS IN MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA.
\* REVISED 7/01 PER 5TH EDITION OF MANUAL FOR EROSION & SEDIMENT CONTROL IN GEORGIA.



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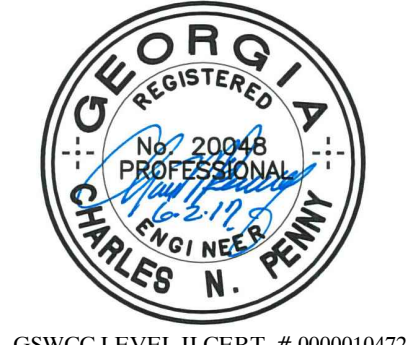
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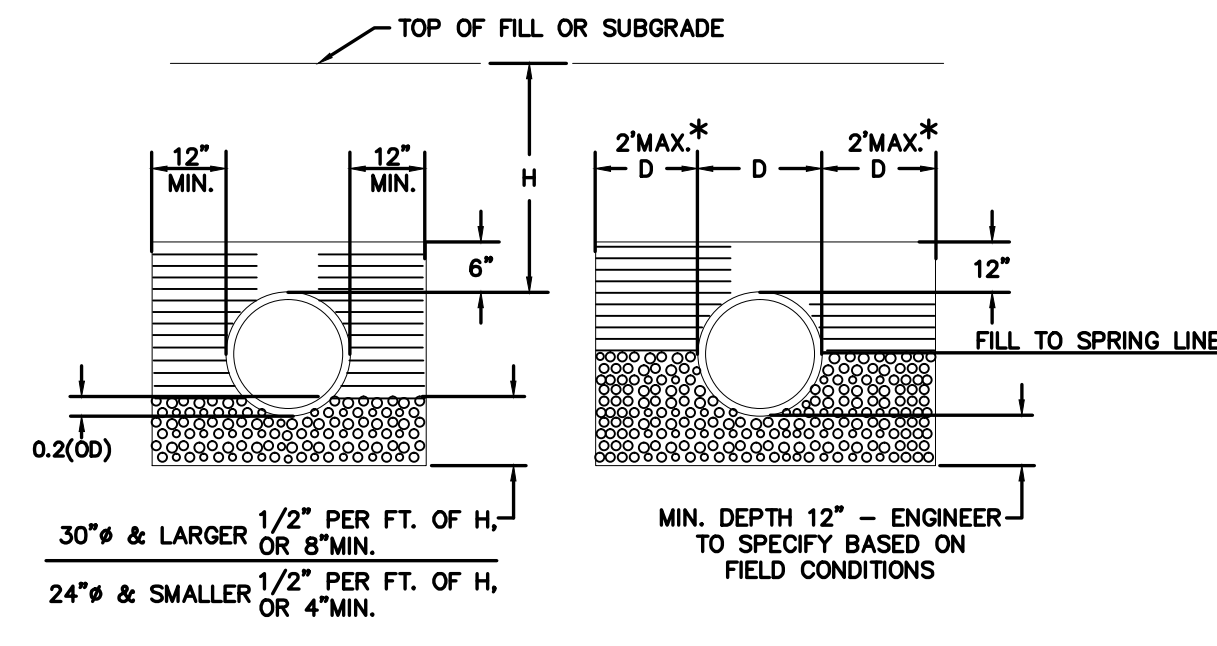
SHEET: EROSION CONTROL DETAILS

PE #: PEF004167



Project No. 16054.00 Issue Date: JUNE 2017
Drawn By: DMG Checked By: CNP

Table with columns: No., Revisions, Date. Contains revision tracking information.



**TYPICAL SECTION**      **FOUNDATION FOR SOFT UNSUITABLE SOILS**

FILL MATERIAL MEETING COUNTY SPECIFICATIONS AND APPROVAL COMPACTED TO 95% MAXIMUM DRY DENSITY.

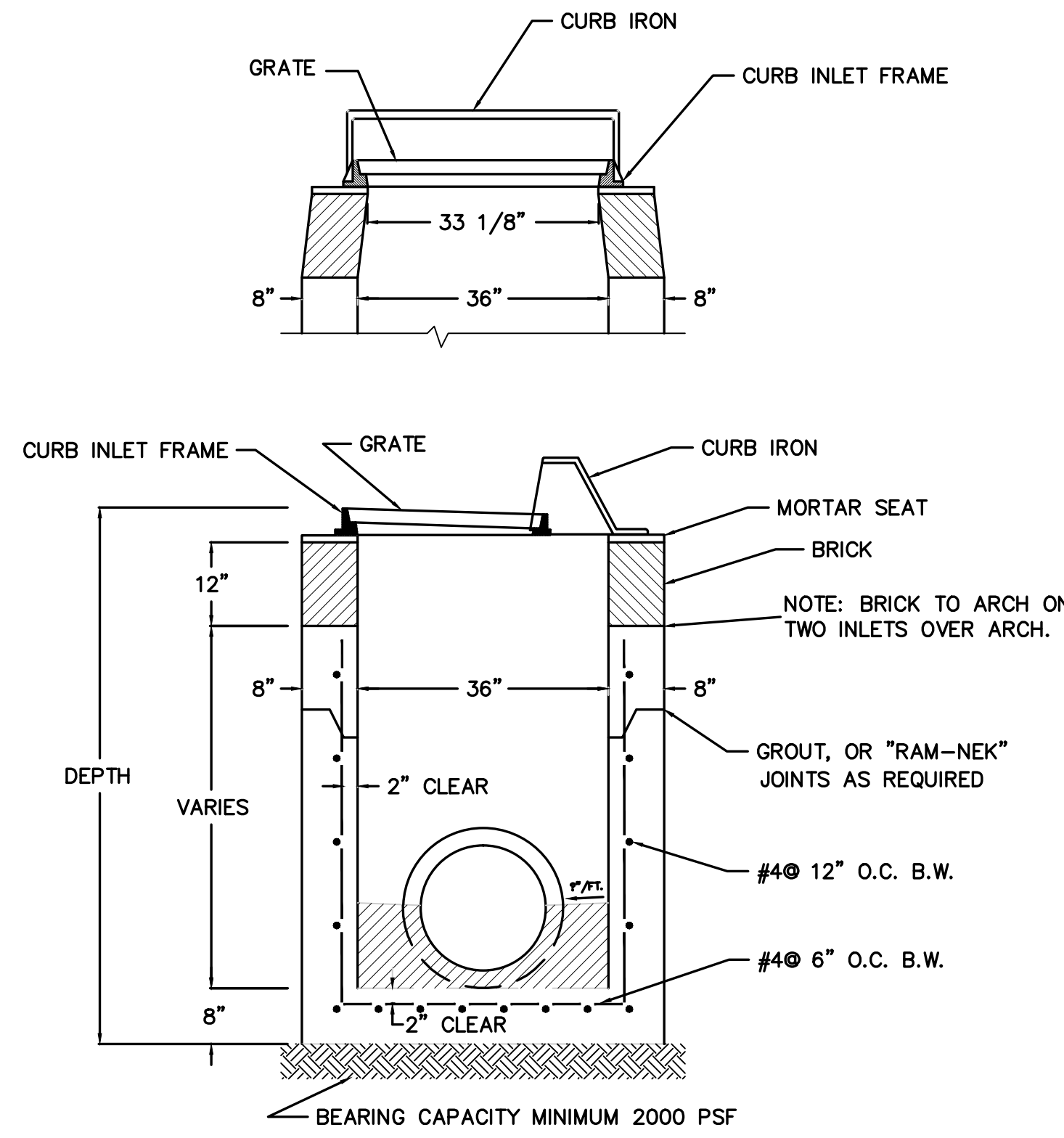
SELECT BACKFILL FREE OF CLUMPS, ROCK ETC. MEETING COUNTY APPROVAL, COMPACTED AT OPTIMUM MOISTURE CONTENT AND 95% STANDARD PROCTOR IN MAXIMUM 6" LAYERS.

FINE GRANULAR MATERIAL APPROVED BY COUNTY, UNIFORMLY COMPACTED TO 95% STANDARD PROCTOR.

MINIMUM COVER SHALL BE 12" FROM TOP OF PIPE TO BOTTOM OF PAVEMENT BASE AT ITS CLOSEST POINT OR AS APPROVED BY ENGINEER.

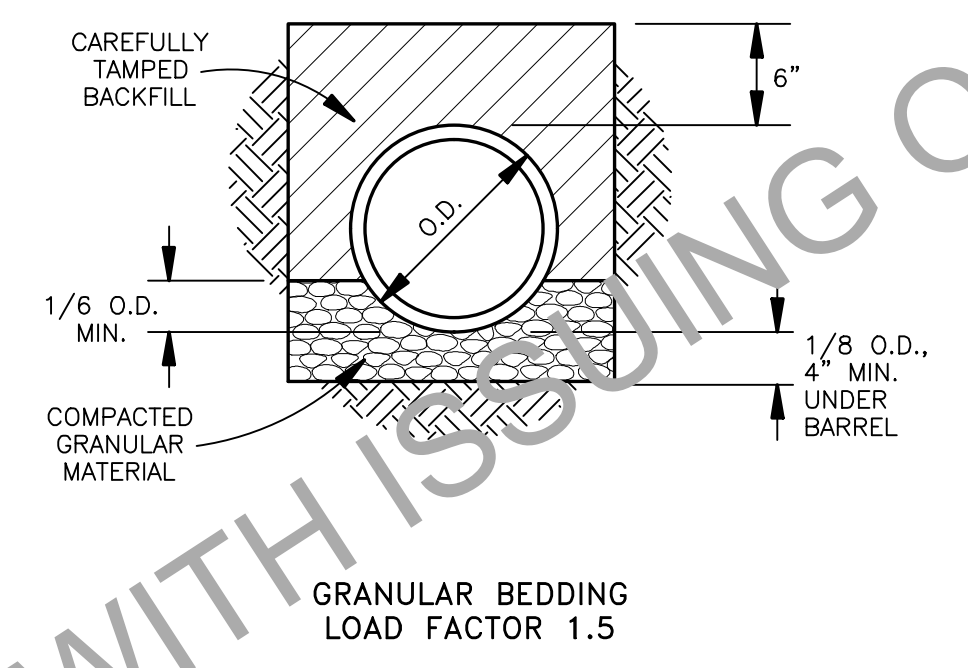
\* DIMENSION MAY NEED TO BE INCREASED BASED ON SOIL CONDITIONS AND DEPTH OF PIPE. EXCAVATION MUST MEET ALL O.S.H.A. GUIDELINES.

**TYPICAL STORM DRAIN TRENCH DETAIL**

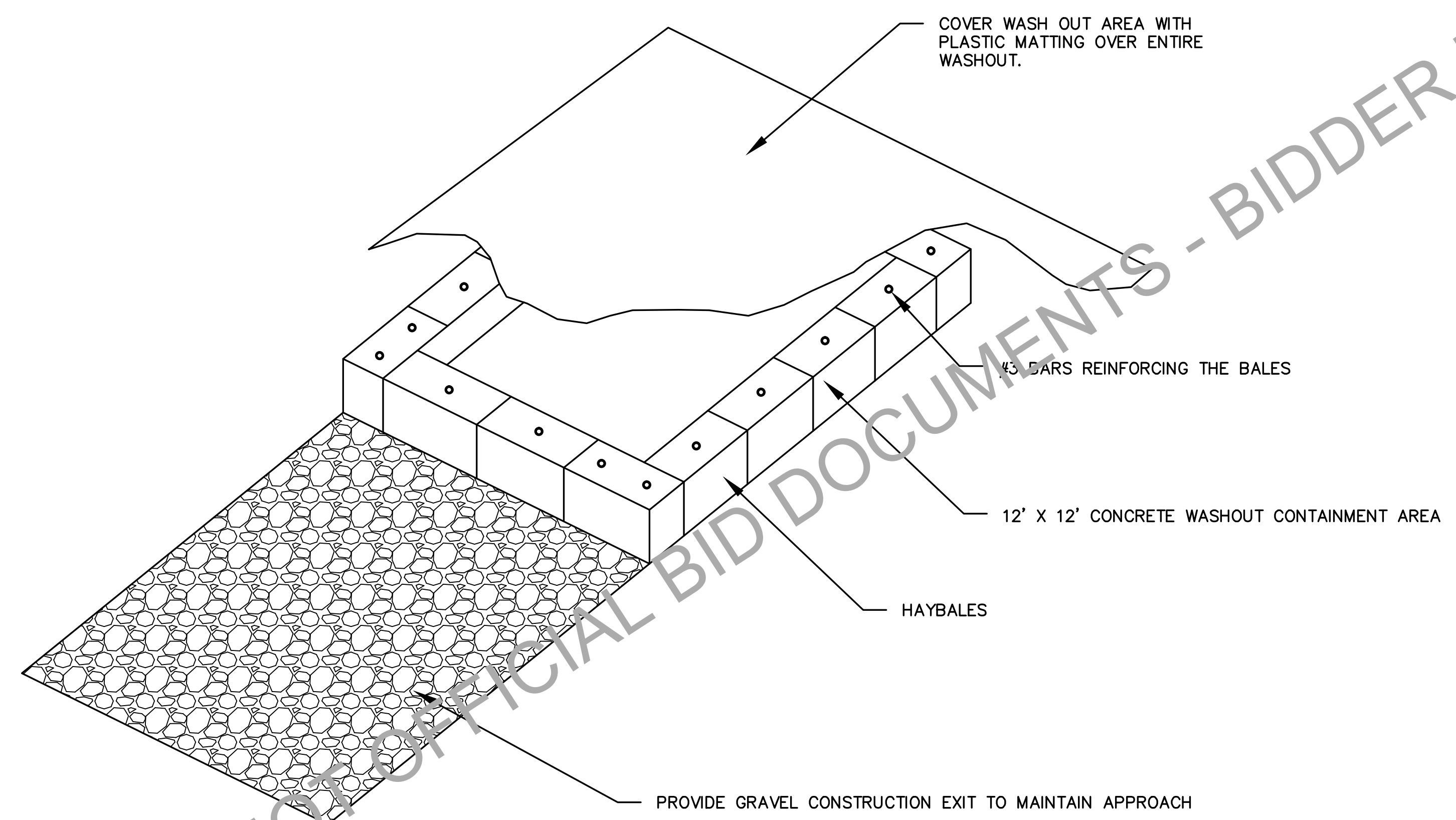


NOTE: CONC. DESIGN STRENGTH 4,000 PSI  
PIPES SHALL BE FLUSH WITH INSIDE WALL  
PIPE MUST NOT BE IN CONST. JOINT

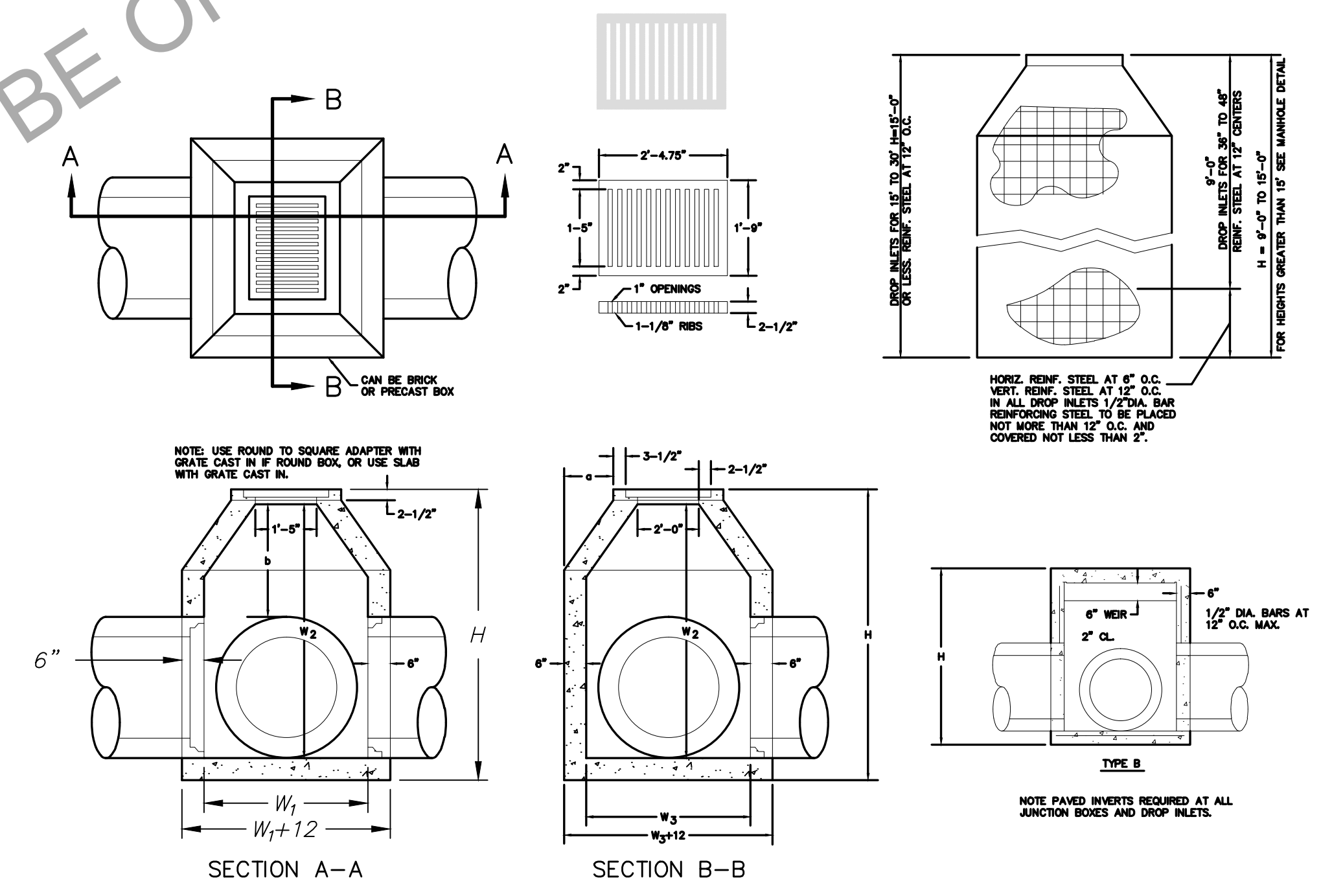
**HOODED GRATE INLET DETAIL**



**PIPE CLASS 'C' BEDDING**



**CONCRETE WASHOUT DETAIL**



D	W <sub>1</sub>	MIN. W <sub>2</sub>	W <sub>3</sub>	a	b	MIN. H	NORMAL W OR W <sub>1</sub>	TYPE B MIN. h	MIN. h
15"	2'-0"	2'-6 1/2"	2'-7"	0'-3 1/2"	0'-6"	3'-3"	2'-0"	2'-7 1/2"	3'-9 1/2"
18"	2'-0"	2'-9 1/2"	2'-7"	0'-3 1/2"	0'-6"	3'-6"	2'-3"	2'-10"	4'-0"
24"	2'-8"	4'-1/2"	3'-3"	0'-7 1/2"	1'-1"	4'-9"	3'-0"	3'-8"	4'-10"
30"	3'-4"	5'-1 1/2"	3'-11"	0'-11 1/2"	1'-8"	5'-10"	3'-6 1/2"	4'-2 1/2"	5'-4 1/2"
36"	3'-10"	6'-1 1/2"	4'-5"	1'-2 1/2"	2'-1 1/4"	6'-10"	4'-2"	4'-10"	6'-0"
42"	4'-5"	7'-2 1/2"	5'-0"	1'-6"	2'-7 1/2"	7'-11"	4'-8 1/2"	5'-4 1/2"	6'-6 1/2"
48"	5'-0"	8'-3 1/2"	5'-7"	1'-9 1/2"	3'-1 1/4"	9'-0"	5'-3 1/2"	5'-11 1/2"	7'-11 1/2"
54"	5'-7"	9'-4 1/2"	6'-2"	2'-1"	3'-7 1/4"	10'-1"	5'-10"	5'-6"	7'-8"
60"	6'-2"	10'-5 1/2"	6'-9"	2'-4 1/2"	4'-1 1/2"	11'-2"	6'-4 1/2"	7'-1/2"	8'-2 1/2"
60"	6'-9"	11'-6 1/2"	7'-4"	2'-8"	4'-7 1/2"	12'-3"	6'-11"	7'-7"	8'-9"
72"	7'-4"	12'-7 1/2"	7'-11"	2'-11 1/2"	5'-1 1/4"	13'-4"	7'-5 1/2"	8'-1 1/2"	9'-3"

**CATCH BASIN DROP INLET**

NTS

No.	Revisions:	Date



**PARAGON CONSULTING GROUP**

118 n. expressway griffin, georgia 30223  
phone (770) 412-7700 fax (770) 412-7744

CONSTRUCTION PLANS FOR

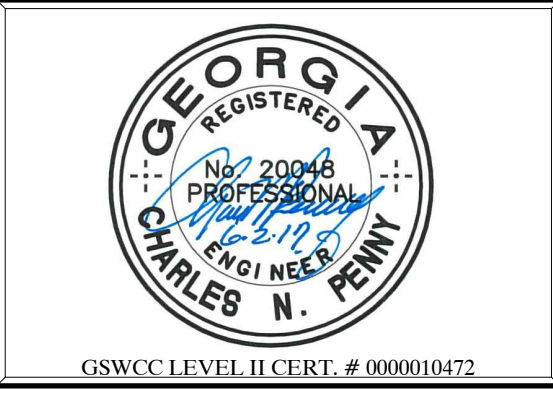
**12th STREET CULVERT REPLACEMENT**

LOCATED IN LANDLOT 129 OF THE 3rd DISTRICT, SPALDING COUNTY

The client acknowledges that these documents are the work papers of Paragon Consulting Group, Inc. and are their instruments of professional service. These documents shall not be reused or modified in any way without the prior written authorization of Paragon Consulting Group, Inc.

SHEET: CONSTRUCTION DETAILS

PE #: PEF004167



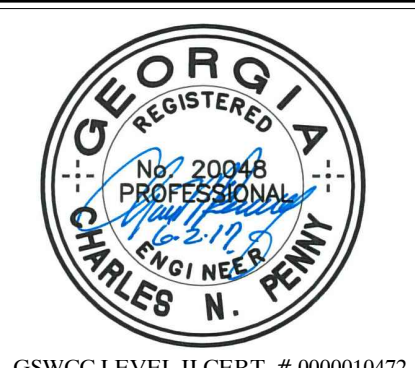
Project No. 16054.00 Issue Date: JUNE 2017  
Drawn By: DMG Checked By: CNP

CONSTRUCTION PLANS FOR  
**12th STREET CULVERT  
REPLACEMENT**  
LOCATED IN LANDLOT 129 OF THE 3rd DISTRICT, SPALDING COUNTY

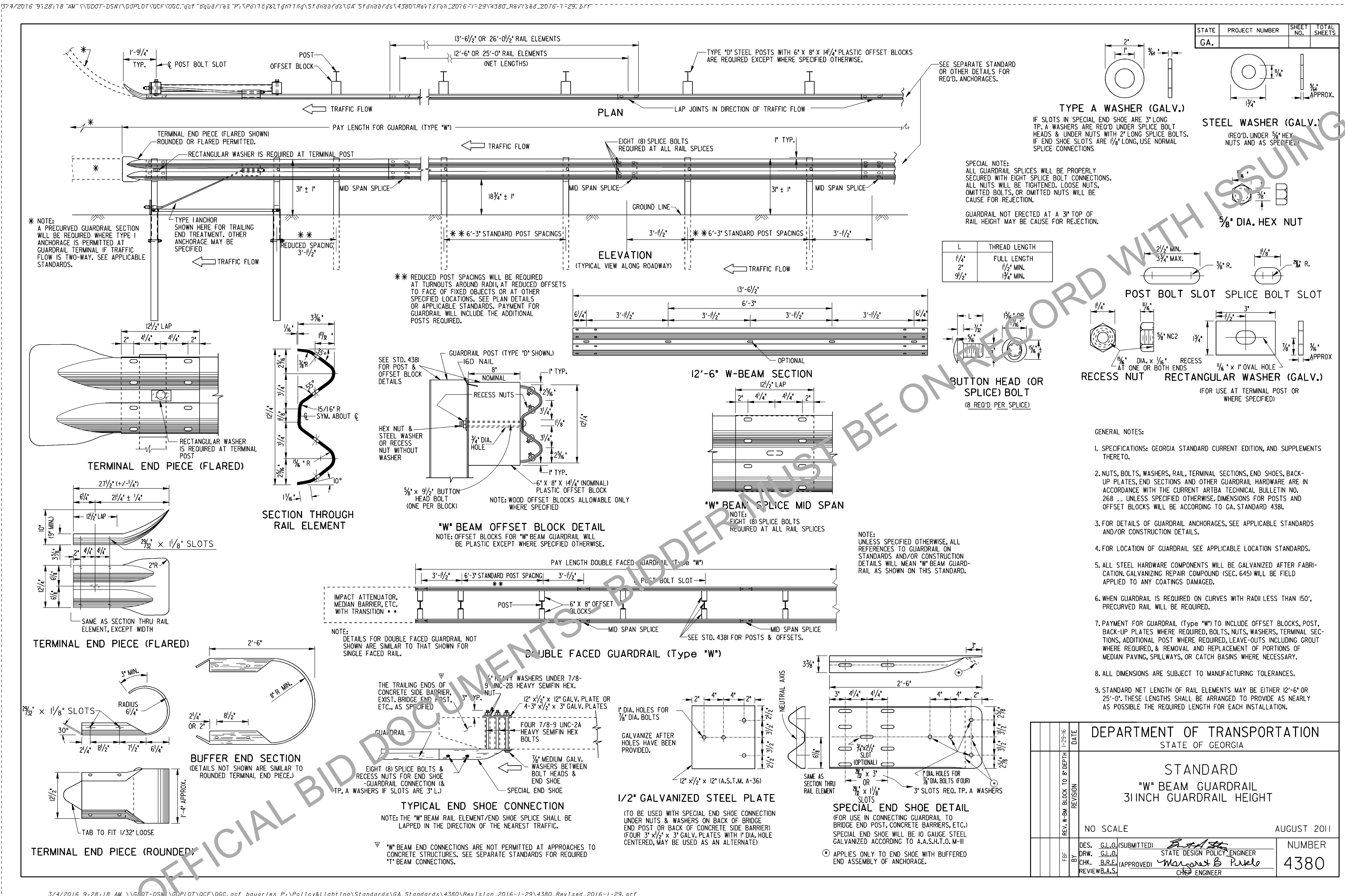
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SHEET:  
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Project No. 16054.00 Issue Date: JUNE 2017  
Drawn By: DMG Checked By: CNP



DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA

STANDARD  
"W" BEAM GUARDRAIL  
31 INCH GUARDRAIL HEIGHT

NO SCALE AUGUST 2011

DES. (G.L.D.) (SUBMITTED)	STATE DESIGN POLICY ENGINEER	NUMBER
DRW. (G.L.D.)	APPROVED	4380
CHK. (B.B.E.)	CHIEF ENGINEER	
REVIEW (B.A.S.)		

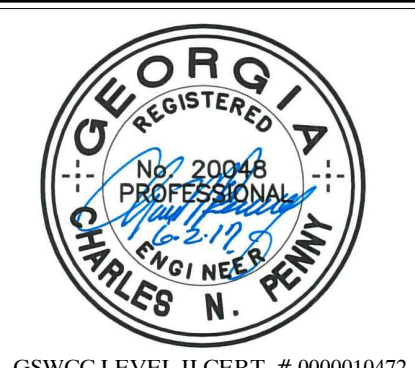
No.	Revisions:	Date

CONSTRUCTION PLANS FOR  
**12th STREET CULVERT REPLACEMENT**  
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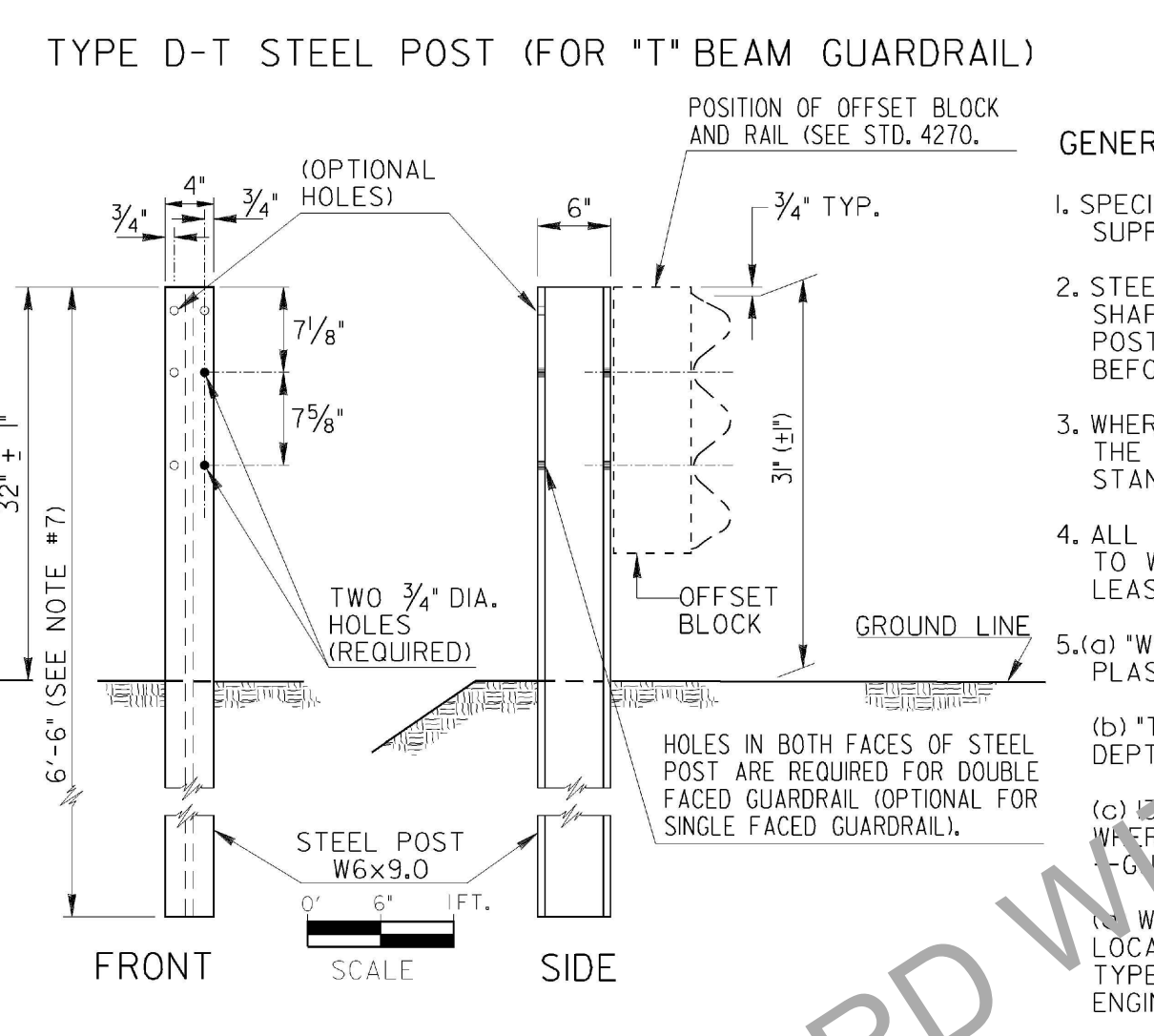
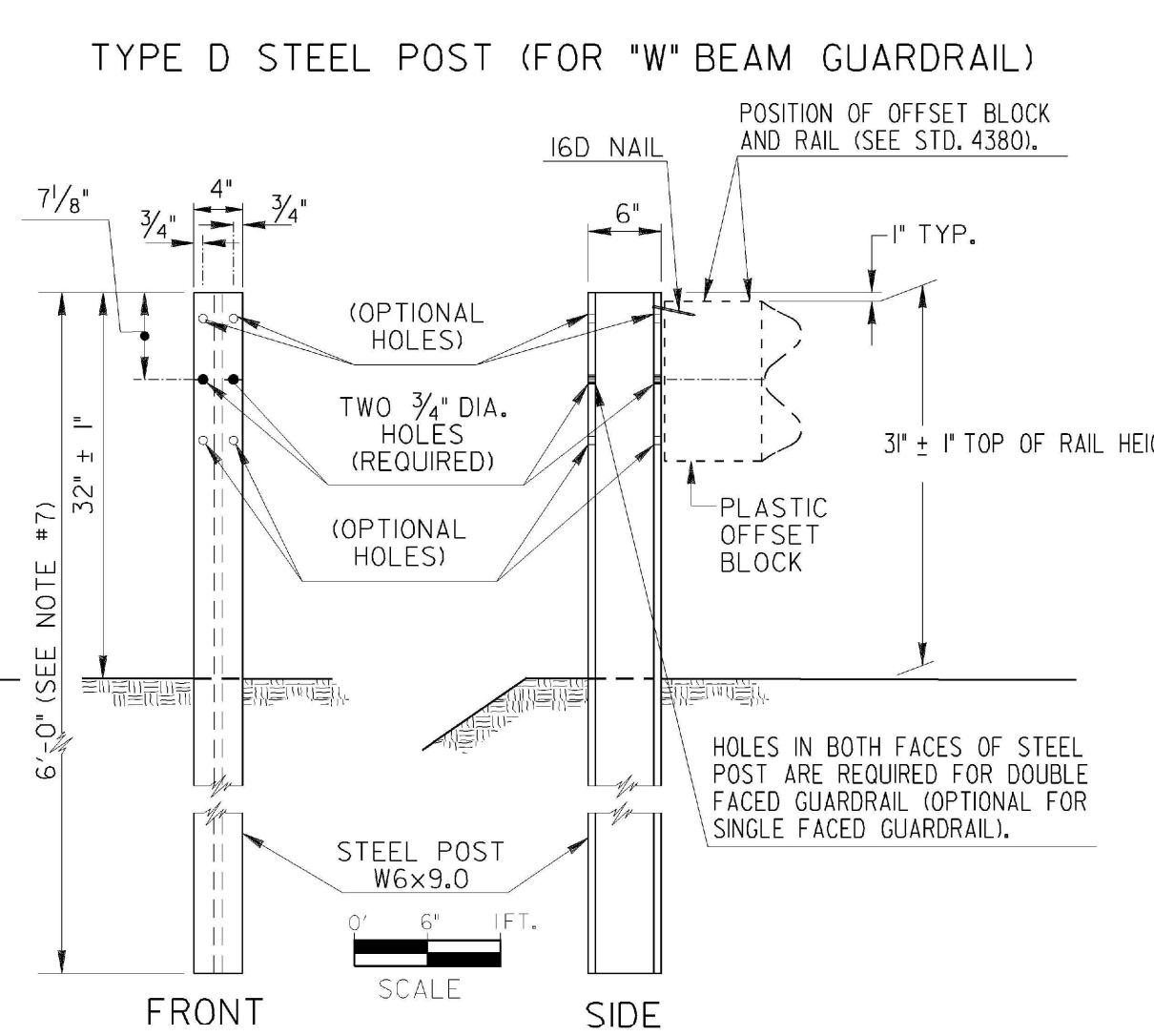
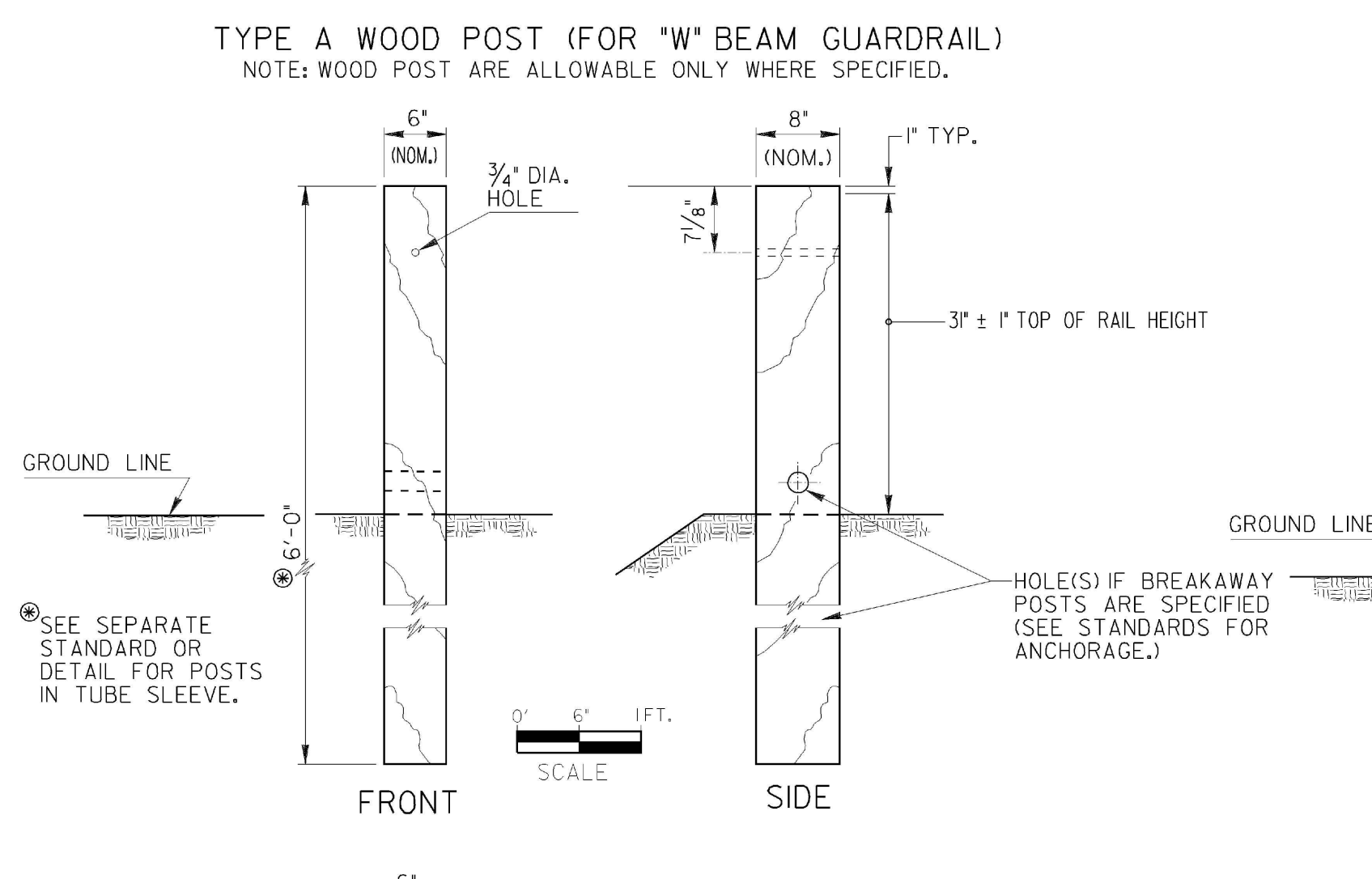
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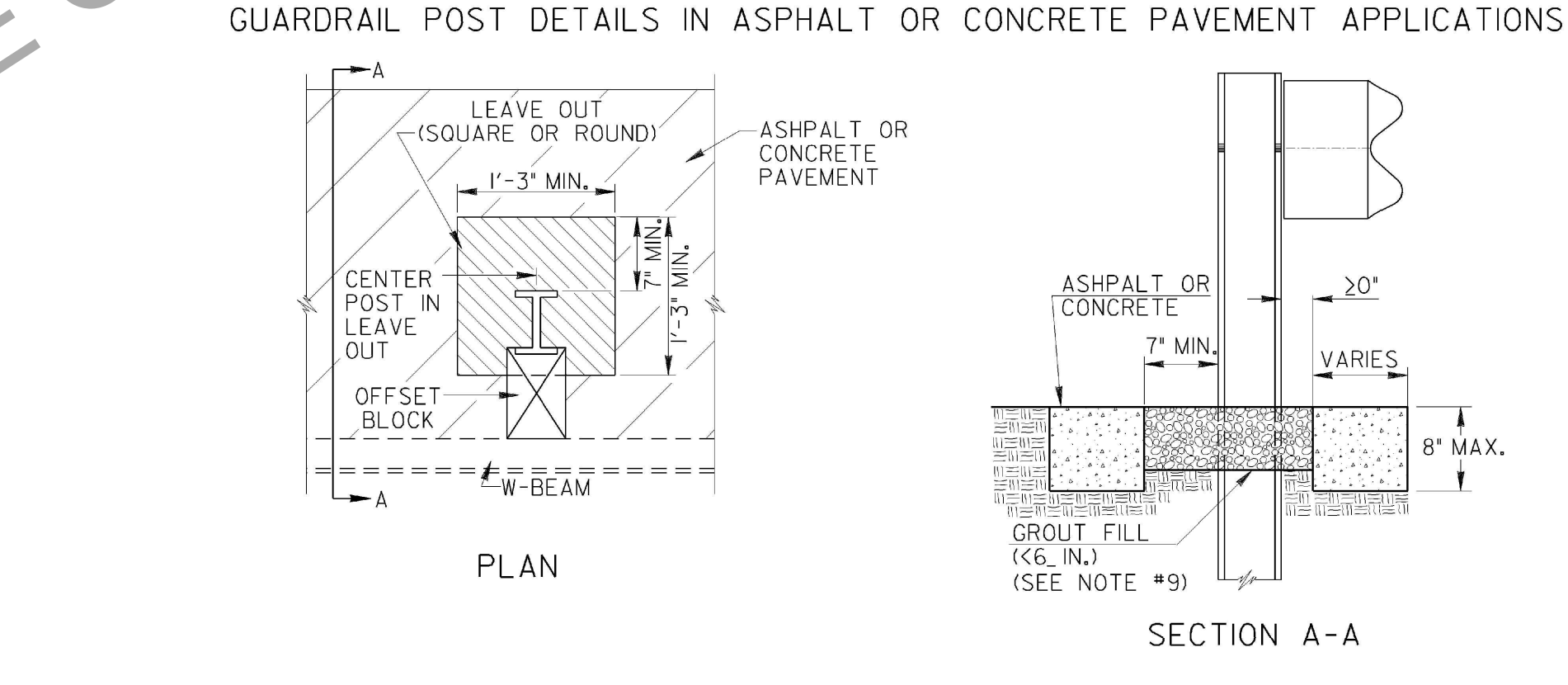
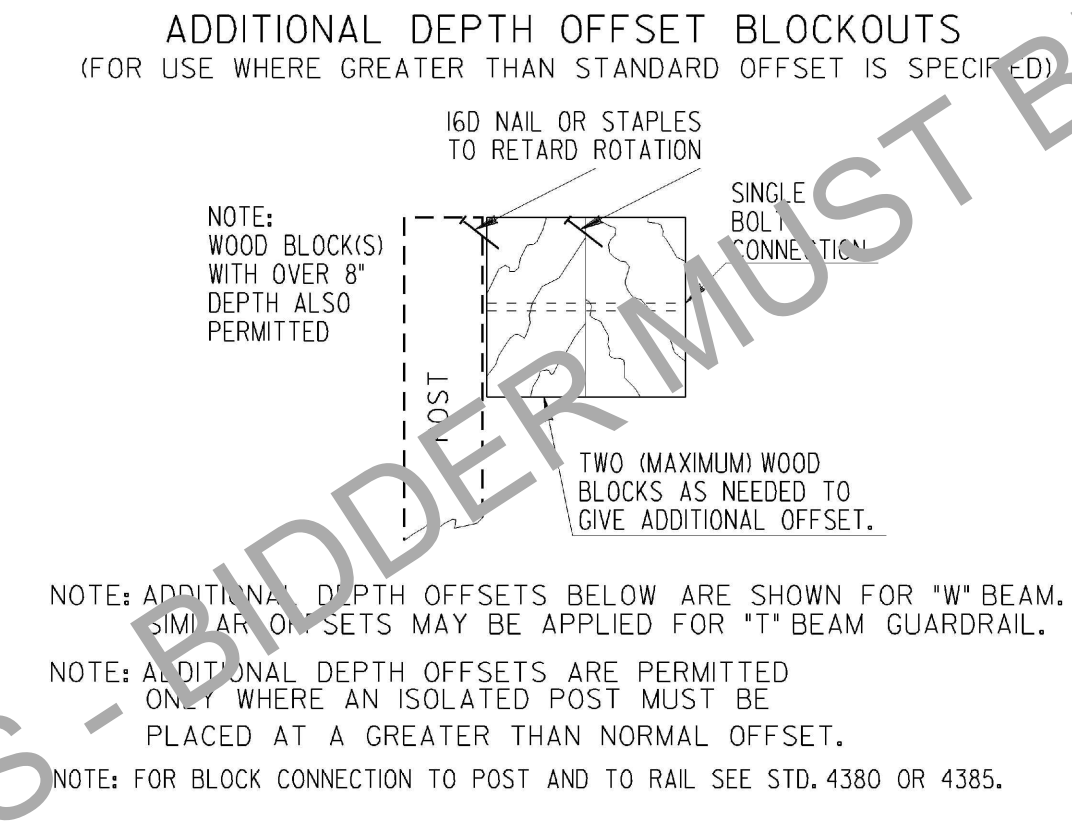
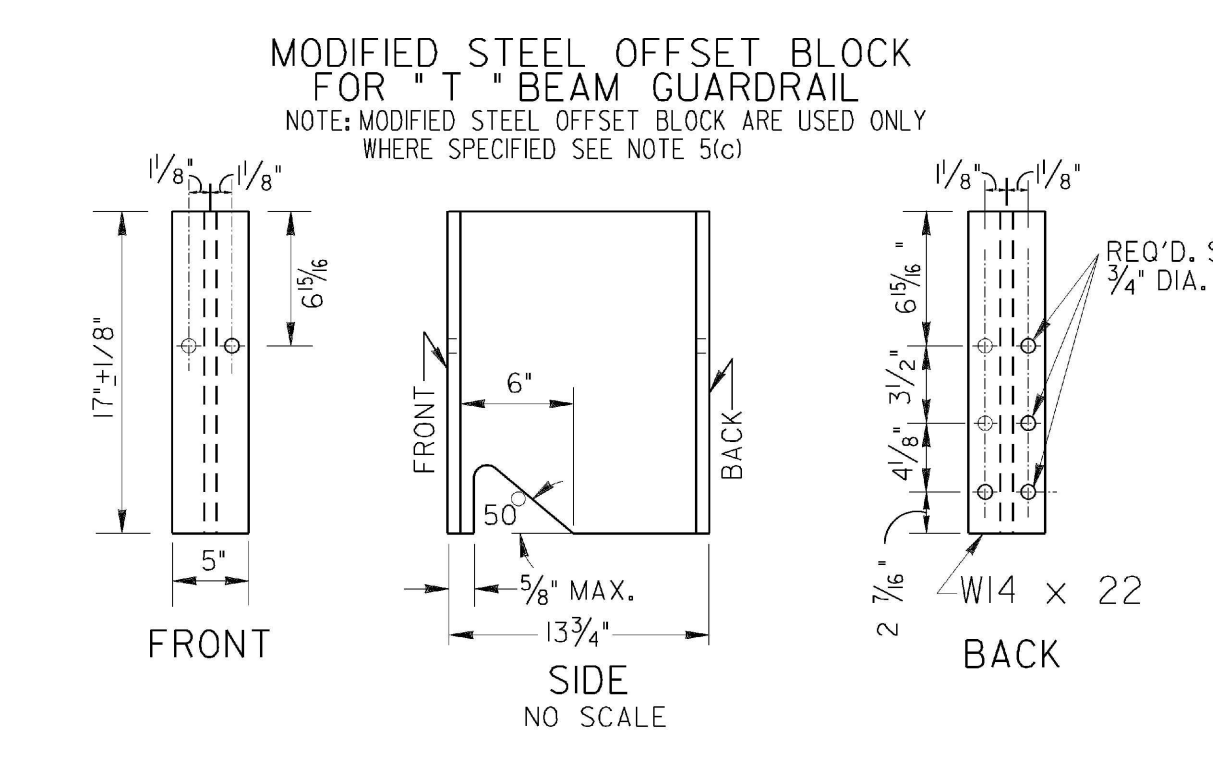
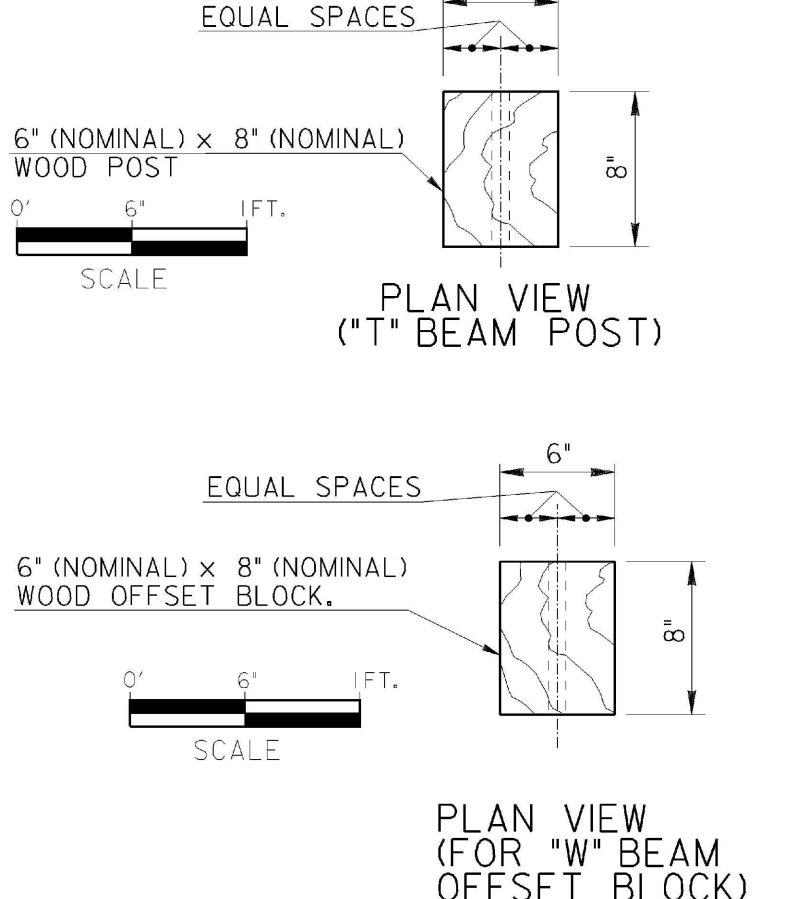


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STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.			



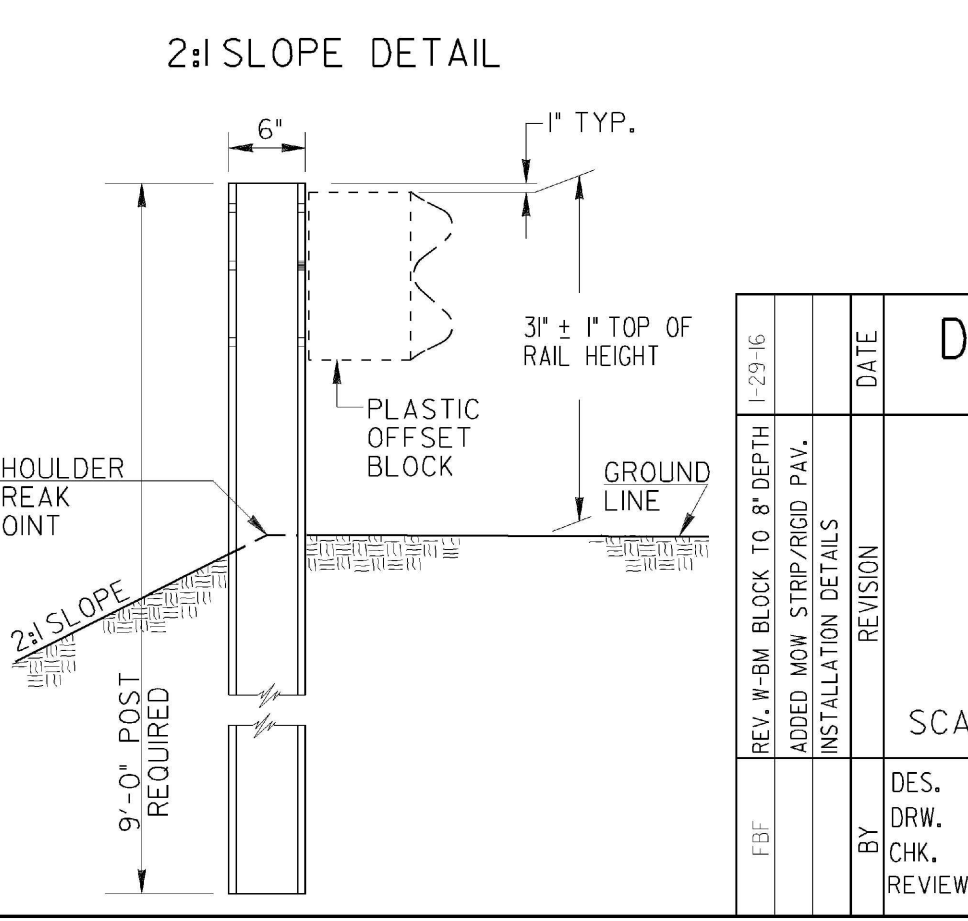
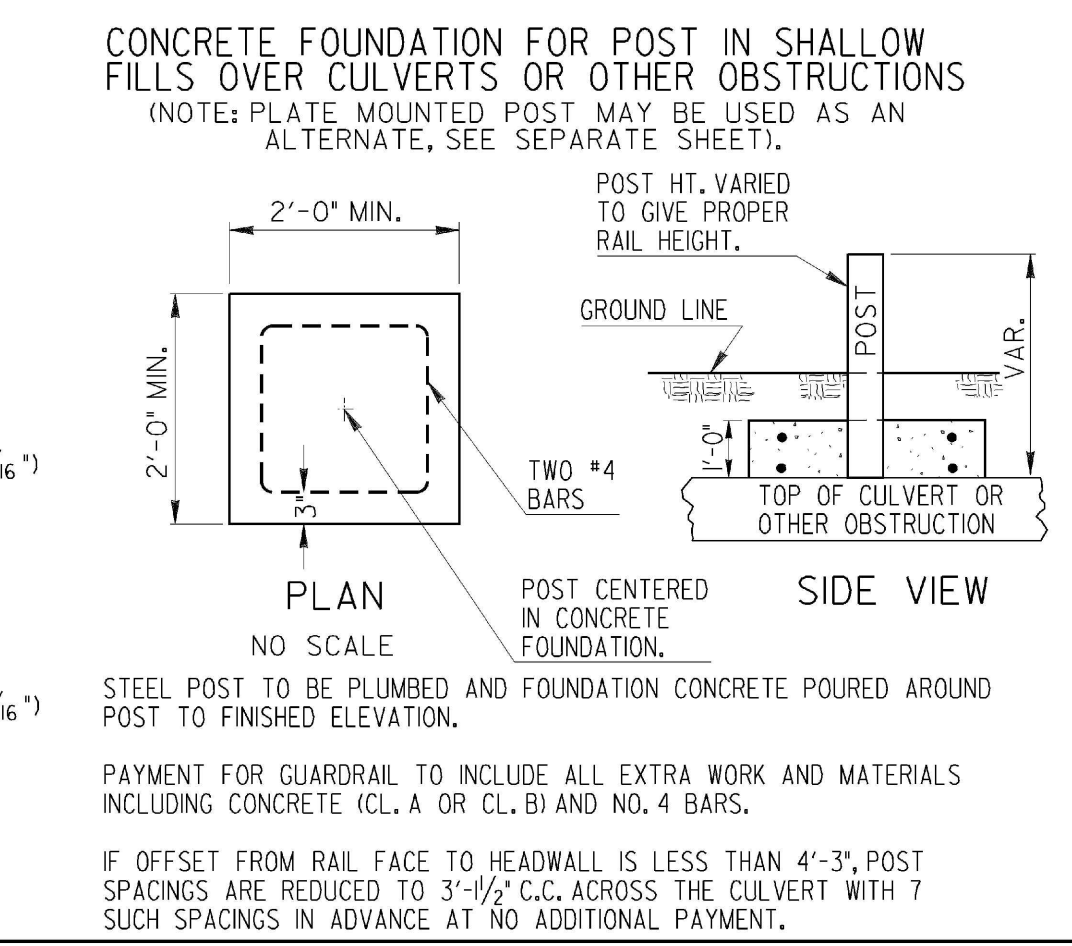
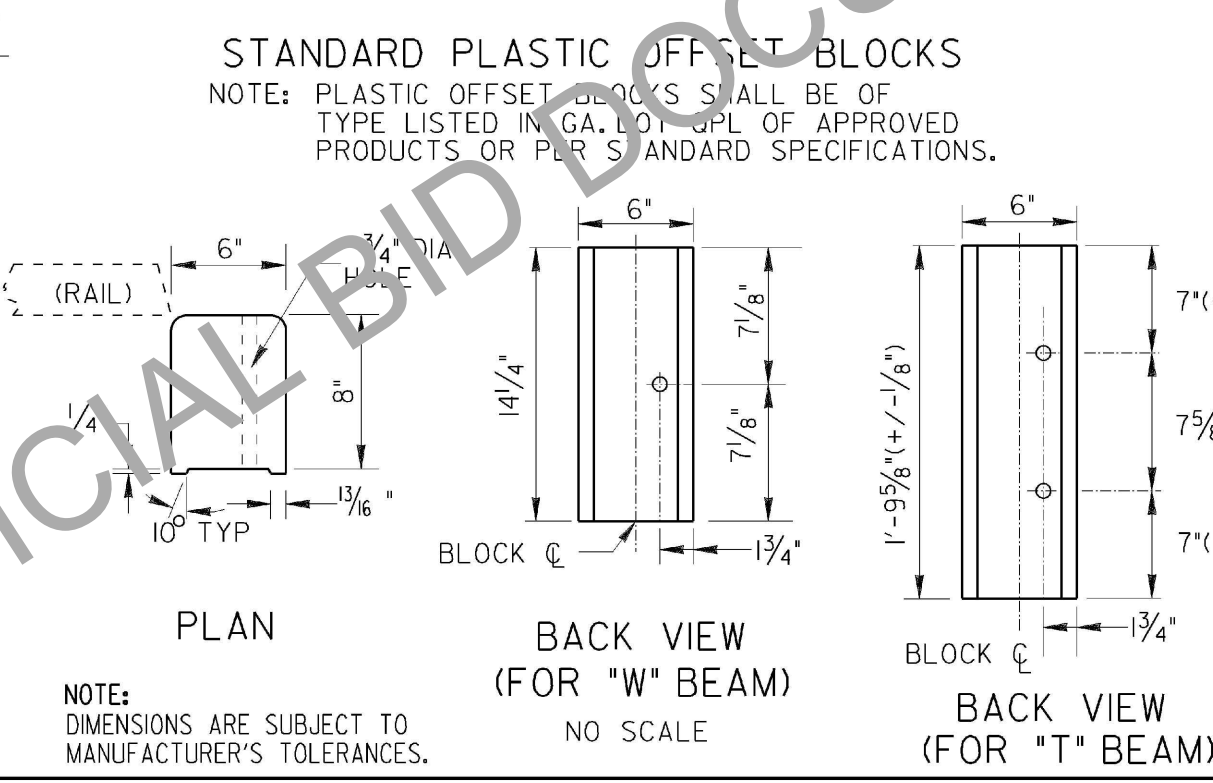
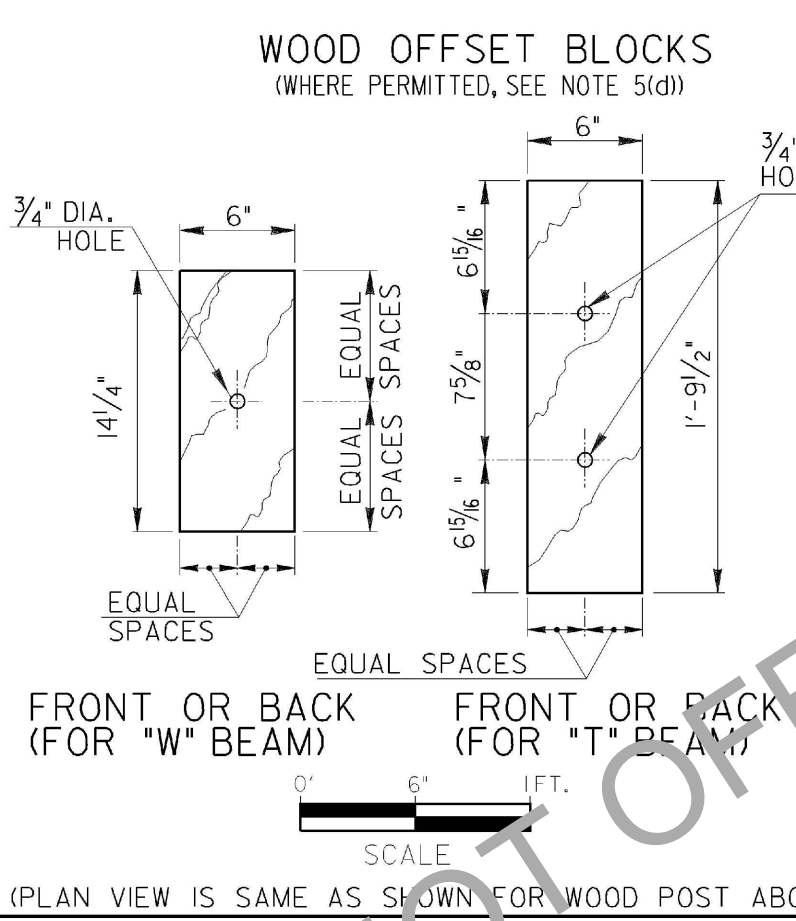
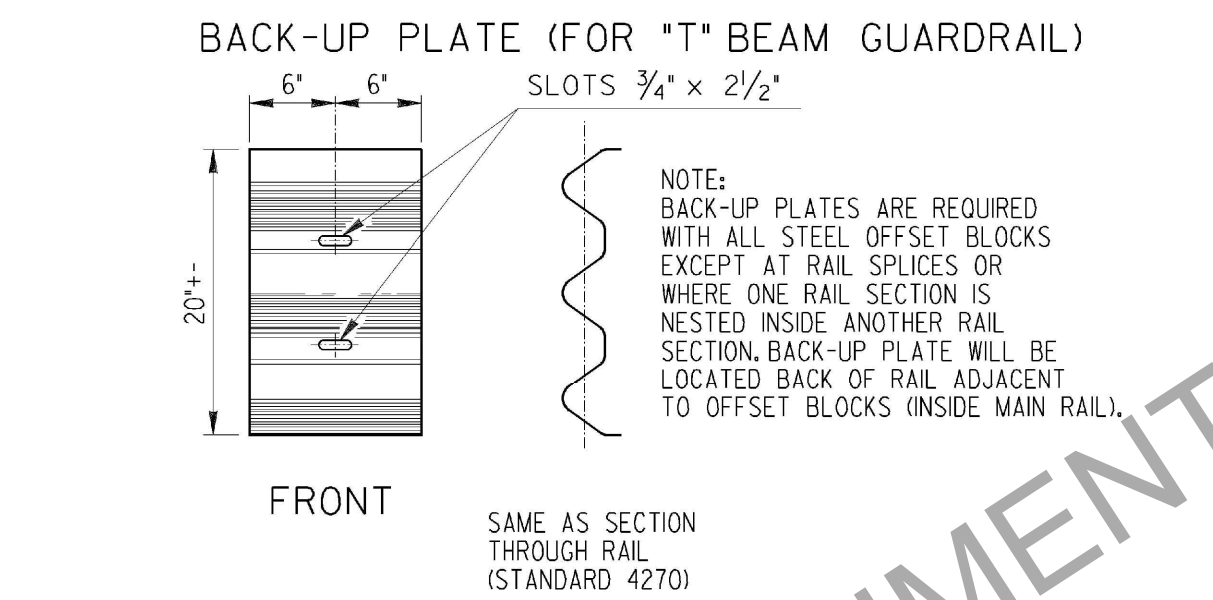
- #### GENERAL NOTES:
- SPECIFICATIONS GEORGIA STANDARD, CURRENT EDITION AND SUPPLEMENTS THERETO.
  - STEEL POSTS MAY BE EITHER ROLLED OR WELDED STRUCTURAL SHAPES, STEEL OFFSET BLOCKS SHALL BE ROLLED, WELDED POSTS SHALL BE SEAL WELDED BETWEEN WEB AND FLANGE BEFORE GALVANIZING.
  - WHERE WOOD POST OR 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.
  - (a) "W" BEAM GUARDRAIL ALL OFFSET BLOCKS SHALL BE 8" DEPTH PLASTIC BLOCKS EXCEPT FOR (c) BELOW.  
(b) "T" BEAM GUARDRAIL STANDARD INSTALLATION WILL USE 8" DEPTH PLASTIC BLOCKS UNLESS OTHERWISE APPROVED.  
(c) 1 1/2" 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.
  - GROUT FILL SHALL BE A CONTROLLED LOW STRENGTH FLOWABLE FILL THAT HAS A MAXIMUM 28-DAY COMPRESSIVE STRENGTH OF 100 P.S.I. ACCORDING TO SPEC. 600.



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.



REVISION		DATE
REV. #	DESCRIPTION	
1	REV. # W/B BLOCK TO 8" DEPTH	12-29-16
2	ADD'D. MOW STRIP/ROAD PAV. INSTALLATION DETAILS	

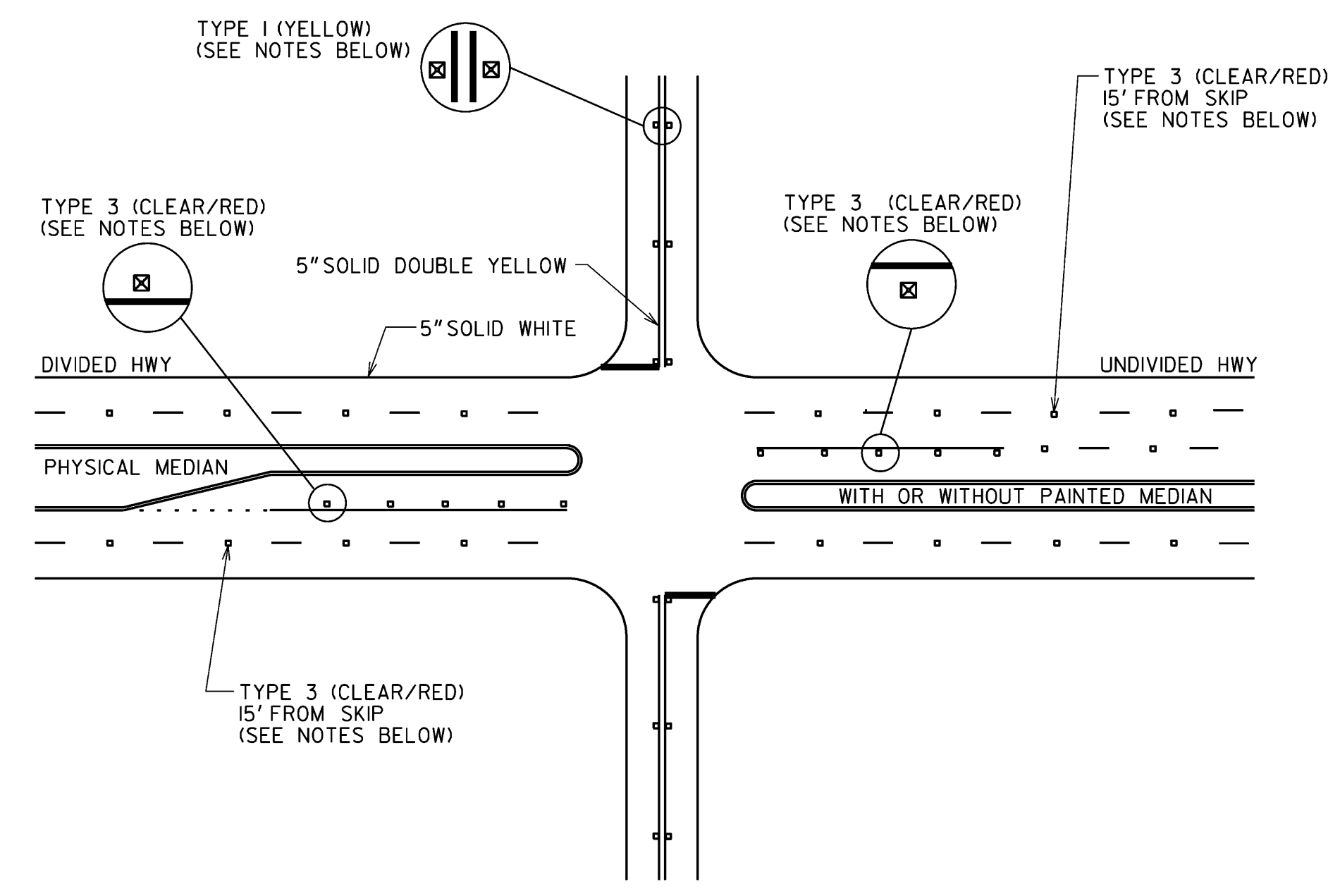
  

DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA	
STANDARD POSTS AND OFFSET BLOCKS FOR "W" & "T" BEAM GUARDRAIL 3 INCH GUARDRAIL HEIGHT	
SCALE: AS SHOWN	AUGUST 2011
DES. G.L.O. (SUBMITTED) <i>B.A.S.</i>	NUMBER 4381
DRW. G.L.O.	STATE DESIGN POLICY ENGINEER
CHK. B.R.E. (APPROVED) <i>Margaret B. Puelo</i>	CHIEF ENGINEER
REVIEW B.A.S.	

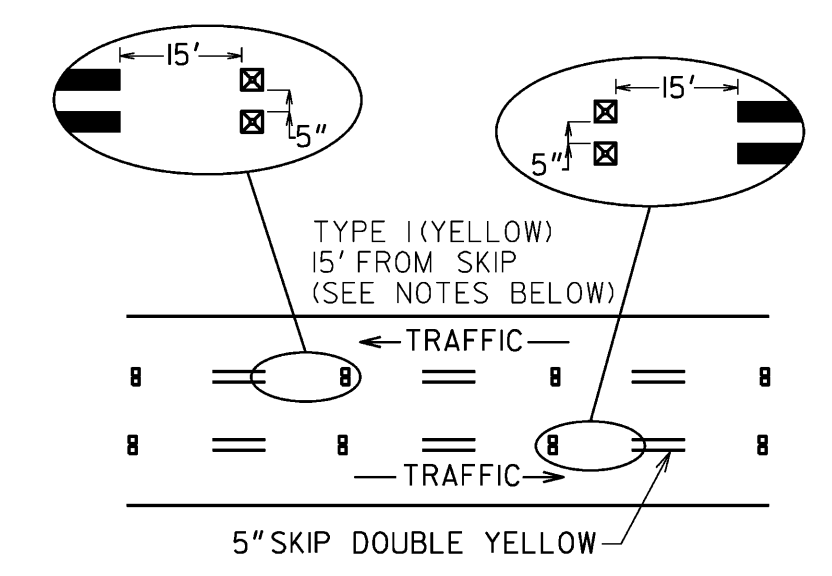
No.	Revisions:	Date

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.			

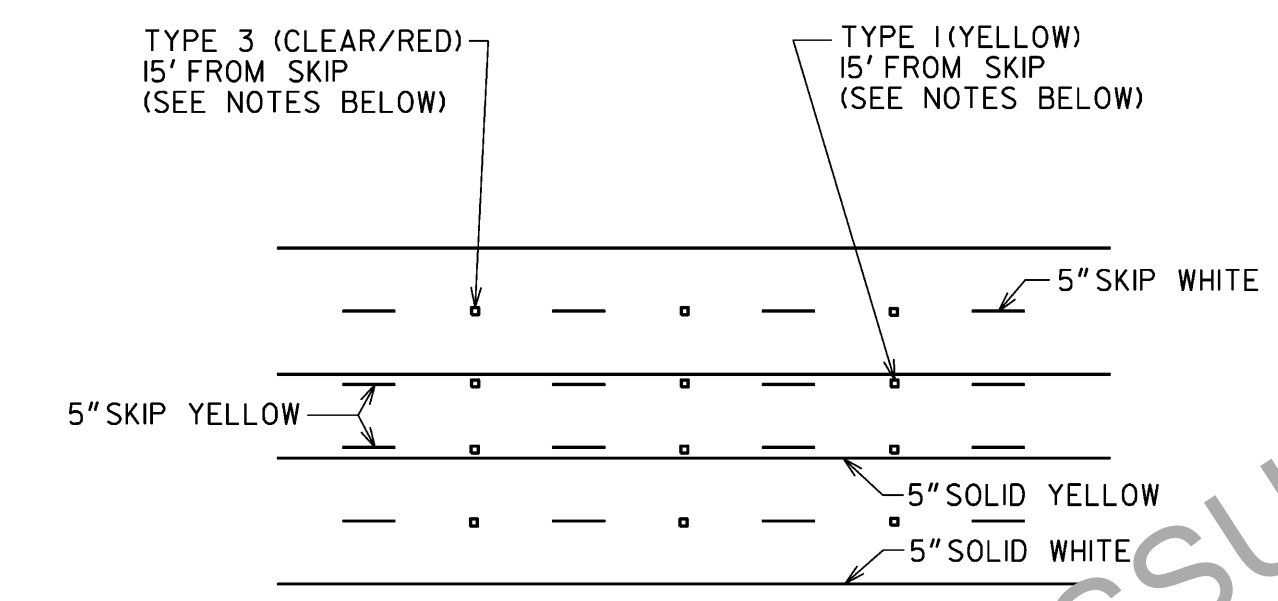
**DIVIDED / UNDIVIDED HIGHWAY**



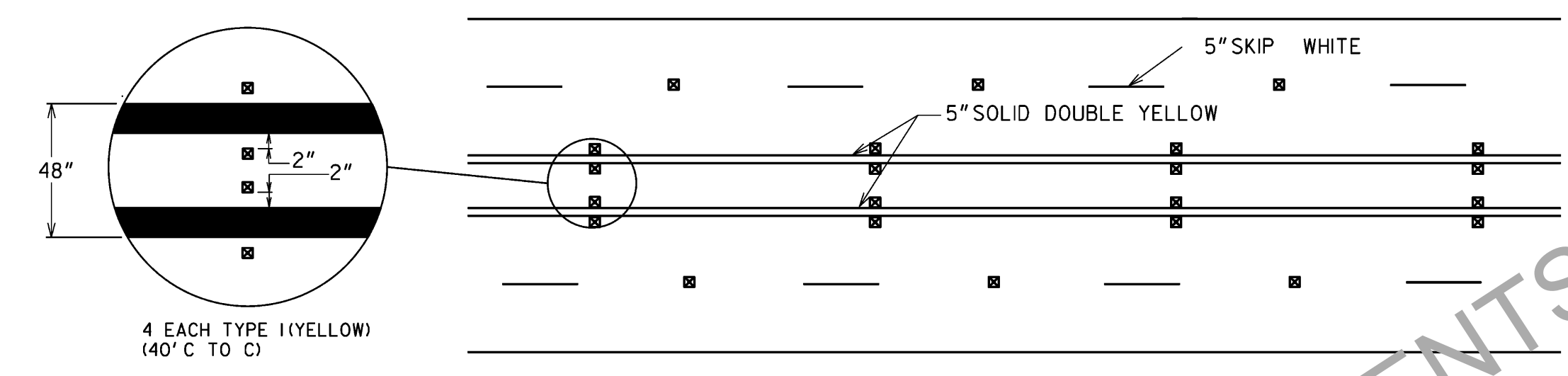
**REVERSIBLE LANE**



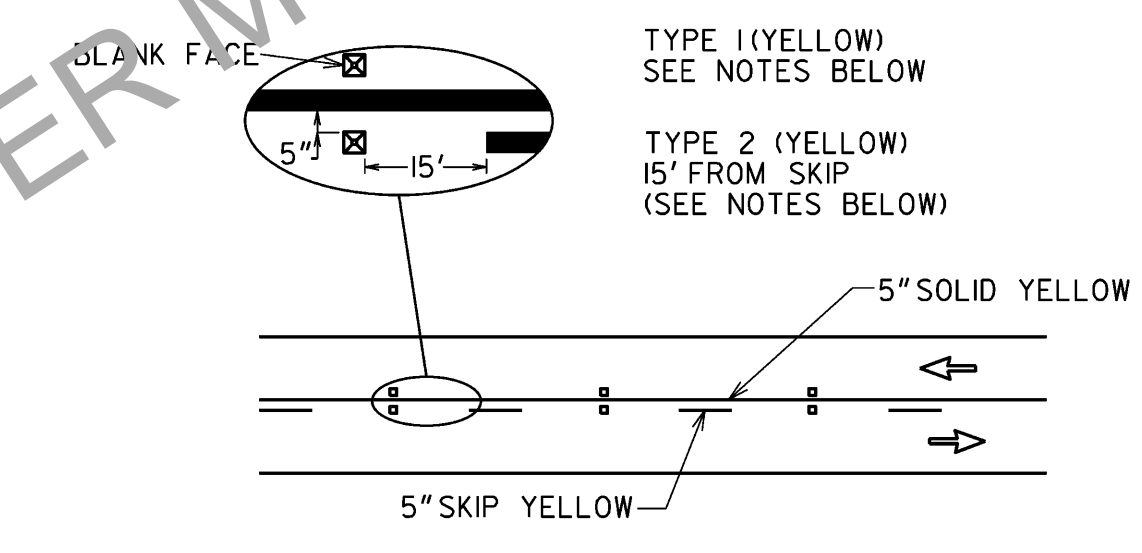
**TWO WAY LEFT TURN LANE**



**4'-0" STRIPED FLUSH MEDIAN**



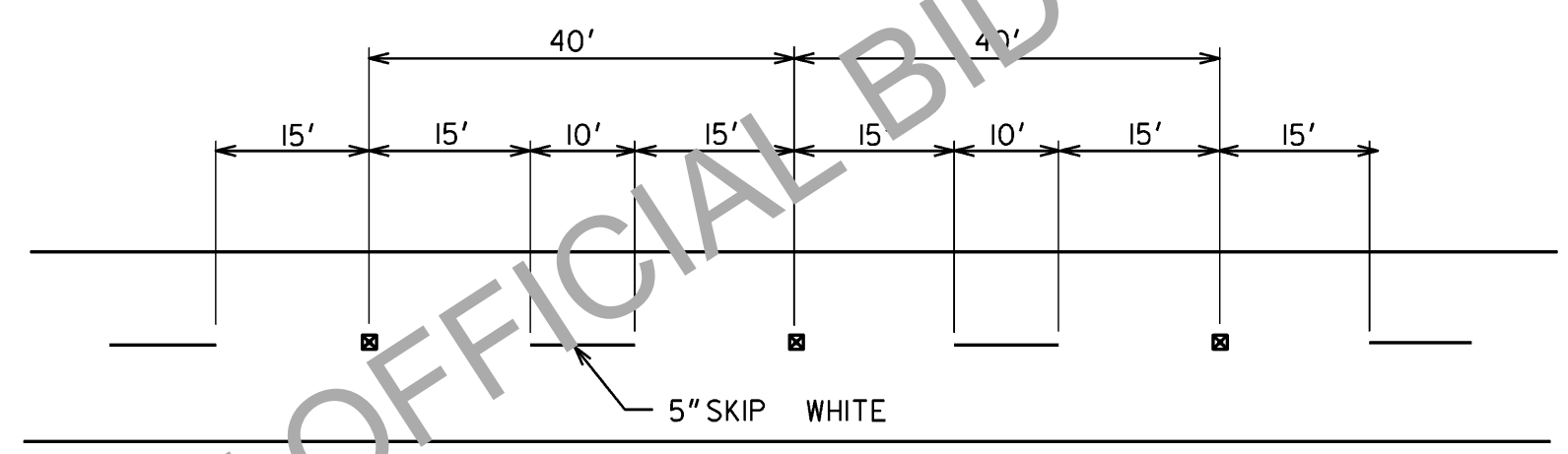
**NO PASSING ZONE**



**GENERAL NOTES:**

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

**TYPICAL RPM/STRIPE SPACING**



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

CONSTRUCTION PLANS FOR

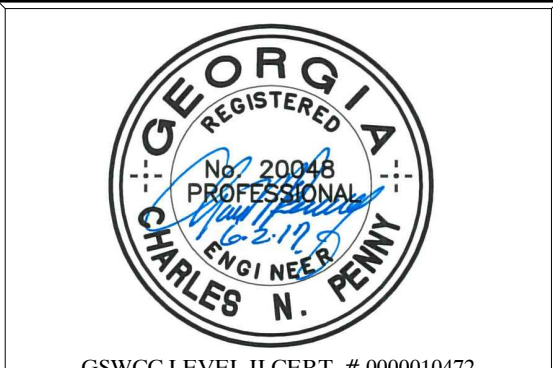
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