

# BUS PARKING & BUILDING IMPROVEMENTS FOR THE JONES COUNTY TRANSPORTATION OFFICE

FOR

## *JONES COUNTY BOARD OF EDUCATION*

*JONES COUNTY, GEORGIA*

*MARCH 2021*

*I&A PROJECT NO.: 1162-003-01*

### PREPARED FOR

**JONES COUNTY BOARD OF EDUCATION**

CHARLES GIBSON

SUPERINTENDENT

JOE EVANS

DIRECTOR OF MAINTENANCE

### DRAWING INDEX

--	TITLE SHEET
1	GENERAL NOTES & LEGEND
2	SITE PLAN & PROFILE
3	PHASE II CONCEPTUAL LAYOUT
4-5	MISCELLANEOUS DETAILS
6	EROSION CONTROL NOTES & DETAILS



## INGRAM & ASSOCIATES CONSULTING ENGINEERS, LLC

T: (478) 745-3996 • 332 New St. • Macon, Ga. 31201 • Fax: (478) 742-4690  
T: (229) 445-1532 • 1002 North Park Ave. • Tifton, Ga. 31793-7547 • [www.ingrameng.com](http://www.ingrameng.com)



I&A PROJECT #: 1162-003-01

**GENERAL GRADING & DRAINAGE NOTES:**

- 1. ALL GRADING, DRAINAGE AND RELATED IMPROVEMENTS SHALL CONFORM TO THE FOLLOWING, AS APPROPRIATE:
A) MANUAL FOR EROSION & SEDIMENTATION CONTROL IN GEORGIA - CURRENT EDITION.
B) LOCAL COUNTY ORDINANCES IF APPLICABLE.
C) NPDES PERMIT IF APPLICABLE.
D) GEORGIA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION OF TRANSPORTATION SYSTEMS 2016 SUPPLEMENT EDITION TO THE 2013 EDITION.
E) GDOT STANDARD DETAIL WEB SITE: http://mydocs.dot.ga.gov/info/gdotpubs/ConstructionStandardsAndDetails/Forms/Allitems.aspx

2. DUST SHALL BE CONTROLLED BY WATERING OR OTHER APPROVED METHODS.

3. NO FILL SHALL BE PLACED ON EXISTING GROUND UNTIL THE GROUND HAS BEEN CLEARED OF WEEDS, DEBRIS, TOPSOIL AND OTHER DELETERIOUS MATERIAL.

4. MAXIMUM CUT AND FILL SLOPE = 3:1 UNLESS OTHERWISE NOTED ON PLANS.

5. ALL EXISTING DRAINAGE COURSES ON THE PROJECT SITE MUST CONTINUE TO FUNCTION, ESPECIALLY DURING STORM CONDITIONS. PROTECTIVE MEASURES AND TEMPORARY DRAINAGE PROVISIONS MUST BE USED TO PROTECT ADJOINING PROPERTIES DURING GRADING OPERATIONS.

6. FINISH GRADE SHALL BE SLOPED AWAY FROM ALL WING OR HEAD WALLS AT NOT LESS THAN 1/2" PER FOOT FOR A MINIMUM OF 3'.

7. ALL CUT AND FILL SLOPES SHALL BE PLANTED WITH GRASS OR GROUND COVER TO PROTECT THE SLOPE FROM EROSION AND INSTABILITY.

8. THE CONTRACTOR SHALL NOTIFY THE UTILITY PROTECTION AGENCY 72 HOURS PRIOR TO THE START OF WORK. THE UTILITY PROTECTION AGENCY'S PHONE NUMBER IS 1-800-282-7411. (GEORGIA 811)

9. EXCAVATIONS:
A) AFTER STRIPING & STOCKPILING TOPSOIL, EXCAVATIONS SHALL BE DEFINED AS UNCLASSIFIED EXCAVATION. NOTIFY OWNERS REPRESENTATIVE IF ROCK IS ENCOUNTERED IN EXCAVATION PROCESS.
B) SUITABLE EXCAVATION MATERIAL SHALL BE TRANSPORTED TO AND PLACED IN FILL AREAS WITHIN THE LIMITS OF THE WORK.
C) UNSUITABLE MATERIAL, ENCOUNTERED IN AREAS TO SUPPORT MAINTENANCE EQUIPMENT LOADS SHALL BE EXCAVATED 2 FEET BELOW FINAL GRADE AND REPLACE WITH SUITABLE MATERIAL FROM SITE OR BORROW EXCAVATIONS.
D) UNSUITABLE AND SURPLUS EXCAVATION MATERIAL NOT REQUIRED FOR FILL SHALL BE DISPOSED OF AS DIRECTED BY OWNER'S REPRESENTATIVE. DO NOT PLACE MATERIALS IN WETLANDS.
E) PROPER DRAINAGE, INCLUDING SEDIMENT AND EROSION CONTROL, SHALL BE MAINTAINED AT ALL TIMES. METHODS SHALL BE IN ACCORDANCE WITH THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM STANDARDS AND OTHER LOCAL, STATE, AND FEDERAL REGULATIONS.
F) UNSUITABLE MATERIALS AS STATED HEREIN SHALL BE HIGHLY PLASTIC CLAY SOILS, OF THE CH AND MH DESIGNATION, BORDERLINE SOILS OF THE SC-OH DESCRIPTION, AND ORGANIC SOILS OF THE OL AND OH DESCRIPTION BASED ON THE UNIFIED SOILS CLASSIFICATION SYSTEM. FURTHER, AND SOILS FOR THE TOP TWO FEET OF ROADWAY SUBGRADE SHALL HAVE NO MORE THAN 15% PASSING THE #200 SIEVE.

14. FILL PLACEMENT
A) FILL SHALL BE REASONABLY FREE FROM ROOTS, ORGANIC MATERIAL, TRASH AND STONES HAVING DIMENSIONS GREATER THAN 4 INCHES.
B) FILL SHALL BE PLACED IN SUCCESSIVE HORIZONTAL LAYERS 6 INCHES TO 12 INCHES IN LOOSE DEPTH FOR THE FULL WIDTH OF THE CROSS-SECTION AND COMPACTED.
C) FILL IN NON-ROADWAY AREAS SHALL BE COMPACTED TO 90% OF THE MAXIMUM LABORATORY DENSITY AT OPTIMUM MOISTURE CONTENT (ASTM D 1557 - MODIFIED PROCTOR).
D) FILL AROUND HEADWALLS/WINGWALLS, STRUCTURAL FILL IN ROADWAY OR EQUIPMENT SUPPORT AREAS SHALL BE COMPACTED TO 95% OF THE MAXIMUM LABORATORY DENSITY AT OPTIMUM MOISTURE CONTENT (ASTM D 1557).
E) BORROW MATERIAL SHALL CONSIST OF SAND OR SAND-CLAY SOILS CAPABLE OF BEING READILY SHAPED AND COMPACTED TO THE REQUIRED DENSITIES, AND SHALL BE FREE OF ROOTS, TRASH AND OTHER DELETERIOUS MATERIAL.
F) ALL SOILS USED FOR STRUCTURAL FILLS SHALL HAVE A PI (PLASTIC INDEX) OF LESS THAN 10, AND A LL (LIQUID LIMIT) OF LESS THAN 30. FILL SOILS SHALL BE DRIED TO APPROPRIATE MOISTURE CONTENTS PRIOR TO COMPACTION.
G) ADDITIONALLY, FILL SOILS USED FOR THE TOP 2 FEET OF FILL BENEATH ROADWAYS SHALL HAVE NO MORE THAN 15% PASSING THE #200 SIEVE.
H) CONTRACTOR SHALL FURNISH ALL BORROW MATERIAL.
I) CONTRACTOR SHALL BE RESPONSIBLE FOR THE BEAR ALL EXPENSES IN DEVELOPING BORROW SOURCES INCLUDING SECURING NECESSARY PERMITS, DRYING THE MATERIAL, HAUL ROADS, CLEARING, GRUBBING, AND EXCAVATING THE PITS; HAUL ROADS, PLACING, RESTORATION OF PITS AND HAUL ROADS TO A CONDITION SATISFACTORY TO PROPERTY OWNERS AND IN COMPLIANCE WITH APPLICABLE STATE AND LOCAL LAWS AND REGULATIONS.
J) CONTRACTOR SHALL STRIP ALL TOPSOIL AND STOCKPILE ON SITE AT A LOCATION DETERMINED BY THE OWNER'S AT THE CONTRACTOR'S EXPENSE.
K) TOPSOIL SHALL BE PLACED TO A DEPTH OF 4" IF AVAILABLE OVER ALL DISTURBED AREAS.

15. STORM CULVERT(S)
A. PIPE TRENCH CONSTRUCTION, BEDDING & BACKFILLING FOR STORM CULVERTS SHALL BE GOVERNED BY GEORGIA DOT STANDARD DETAIL 1030D (3 SHEET SET - SEPT. 2001) FOR ROUND & ARCH/ELLIPTICAL SHAPE PIPE CULVERTS.
B. ALL PIPE CULVERTS UNDER ROADWAYS SHALL BE REINFORCED CONCRETE PIPE (RCP) UNLESS NOTED OTHERWISE.
C. BOX CULVERT PIPE OR CULVERTS SHALL BE EITHER CAST-IN-PLACE OR PRECAST UNITS IN ACCORDANCE WITH THE APPLICABLE GDOT STANDARD DETAIL. PRECAST BOX UNITS SHALL BE PROVIDED & INSTALLED IN ACCORDANCE WITH GDOT STANDARD DETAIL 2530P.
D. CULVERT HEADWALLS, PARAPETS AND WINGWALLS SHALL BE PROVIDED & INSTALLED IN ACCORDANCE WITH THE APPLICABLE GDOT STANDARD DETAIL.

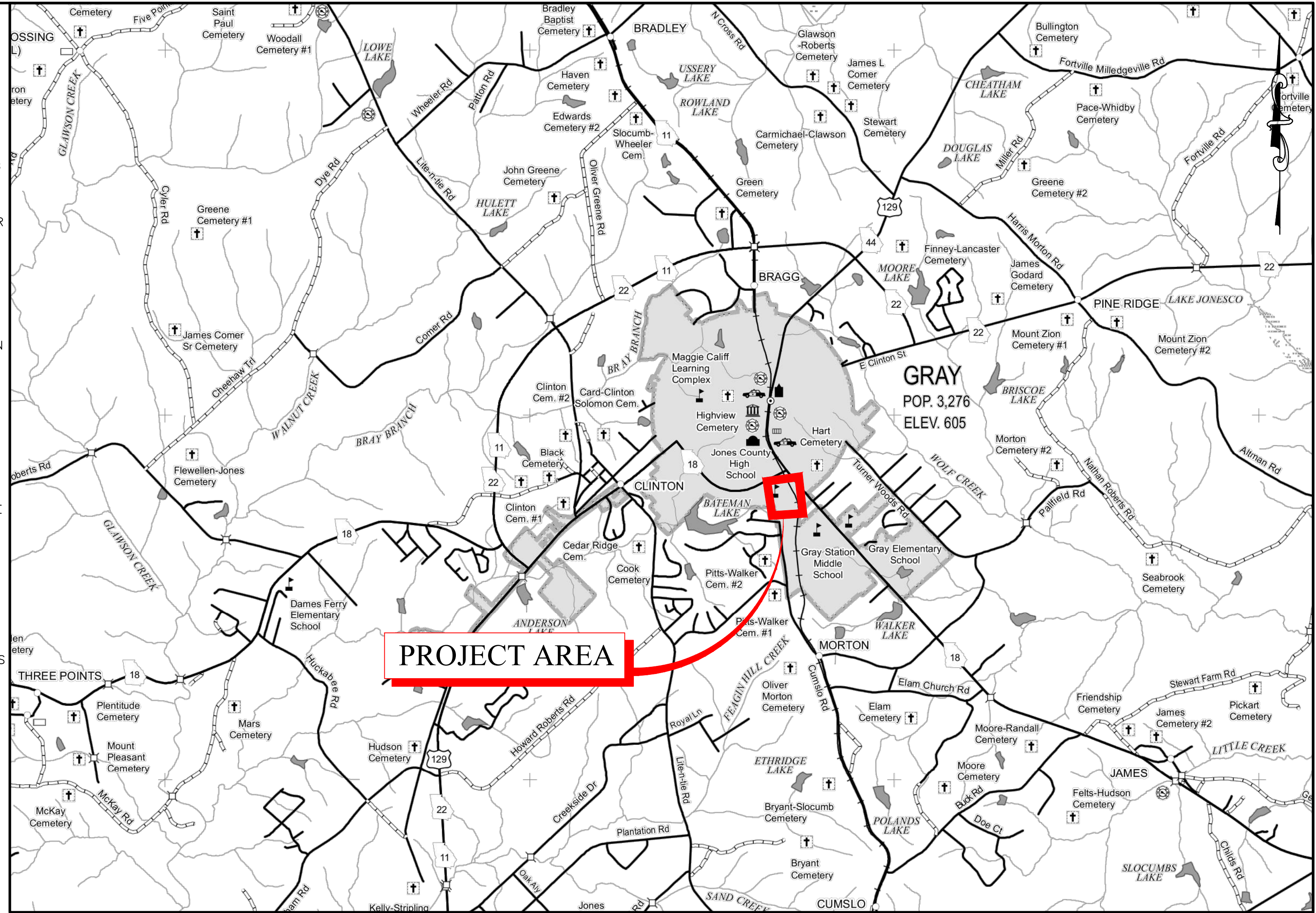
16. ALL TRACK OUT DUST, MUD OR DIRT MUST BE REMOVED FROM PUBLIC STREETS OR ROADWAYS.

17. ALL STORM DRAINAGE PIPES SHALL BE LAID ON SMOOTH, CONTINUOUS GRADES WITH NO VISIBLE BENDS AT THE JOINTS.

18. ALL PIPE LENGTHS AND DISTANCES BETWEEN STRUCTURES ARE MEASURED FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE ALONG A HORIZONTAL PLANE.

**GENERAL NOTES:**

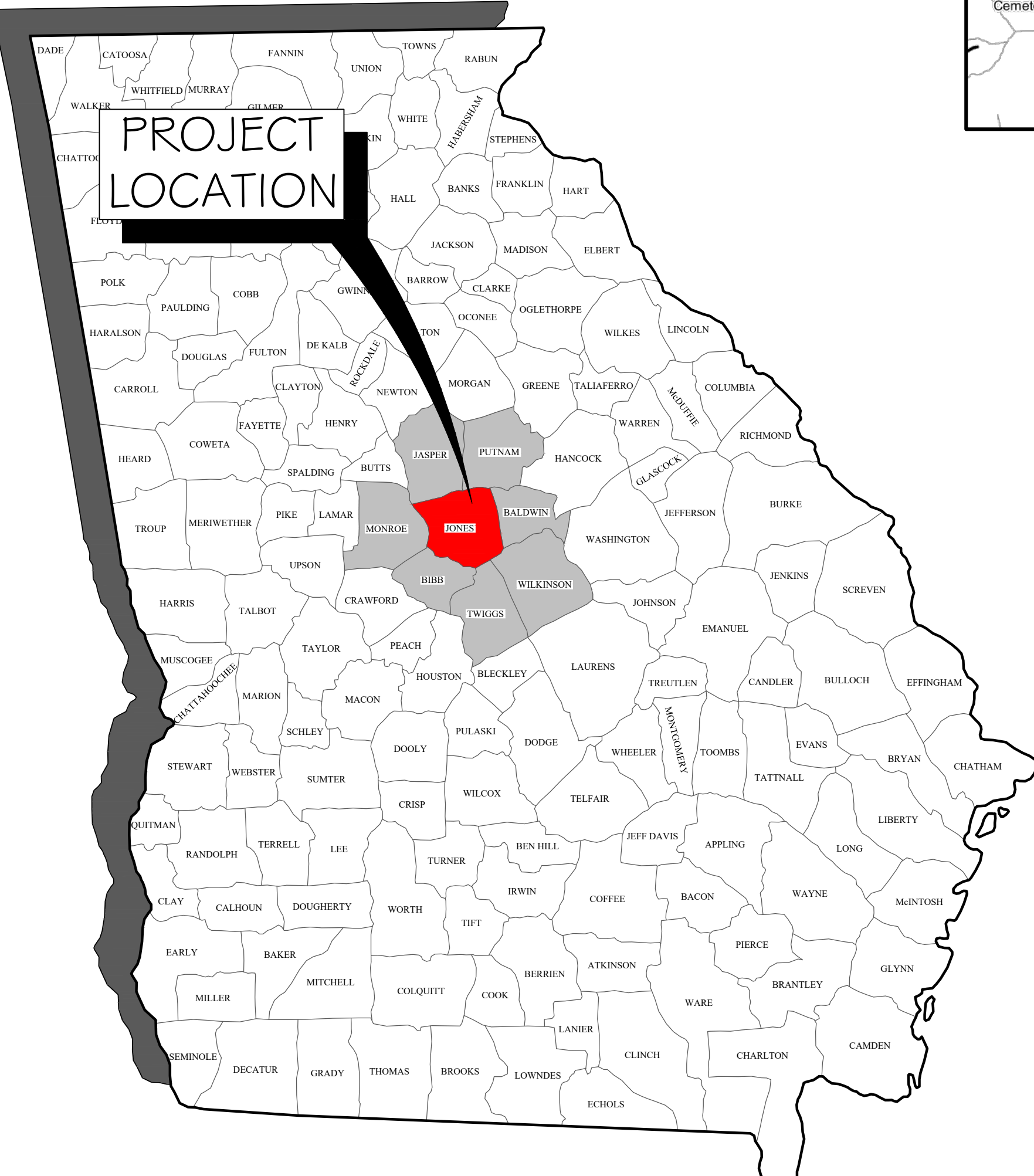
- 1. CONTRACTOR SHALL NOTIFY THE UTILITY PROTECTION AGENCY 72 HOURS PRIOR TO THE START OF WORK. THE UTILITY PROTECTION AGENCY'S PHONE NUMBER IS 1-800-282-7411.(GEORGIA 811)
2. CONTRACTOR SHALL VERIFY LOCATION OF ALL UTILITIES PRIOR TO EXCAVATION.
3. EXISTING UTILITY LINES SHOWN ARE APPROXIMATE LOCATIONS ONLY. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING UTILITY LINE LOCATIONS PRIOR TO ANY CONSTRUCTION. ANY DEVIATIONS FROM THE DESIGN LOCATION SHALL BE REPORTED TO THE ENGINEER PRIOR TO CONSTRUCTION. DAMAGE TO EXISTING UTILITY LINES RESULTING FROM THE CONTRACTOR'S NEGLIGENCE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
4. IF THE CONTRACTOR DAMAGES ANY EXISTING UTILITIES DURING CONSTRUCTION, HE SHALL, AT HIS OWN EXPENSE, REPLACE OR REPAIR THE UTILITIES TO THEIR ORIGINAL CONDITION AND QUALITY, AS APPROVED BY THE ENGINEER AND REPRESENTATIVE FROM THE APPROPRIATE UTILITY COMPANY.
5. WHEN CONSTRUCTION INVOLVES THE REMOVAL OF FENCES, POLES, SIDEWALKS, DRIVEWAY, TEMPORARY OR FIXED STRUCTURES, THE CONTRACTOR, AT HIS EXPENSE, SHALL PROVIDE FOR TEMPORARY SERVICE OF CONTAINMENT TO THE AFFECTED PROPERTY AND SHALL REPLACE SUCH ITEMS WITH SIMILAR OR BETTER MATERIALS AS SOON AS PRACTICAL OR AS DIRECTED BY OWNER'S REPRESENTATIVE FOLLOWING PIPE INSTALLATION.
6. PEDESTRIAN AND LOCAL VEHICULAR TRAFFIC SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION. SAFETY DEVICES AND FLAGMEN SHALL BE PROVIDED BY THE CONTRACTOR AT HIS EXPENSE. WRITTEN PERMISSION TO CLOSE THE CONSTRUCTION AREA TO TRAFFIC MUST BE OBTAINED FROM THE APPROPRIATE GOVERNMENT AGENCY PRIOR TO THE CLOSING.
7. ALL CROSS DRAINS AND DRIVEWAY CULVERTS MUST REMAIN OPEN AT ALL TIMES. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO DRAINS AND CULVERTS.
8. ALL EROSION AND SEDIMENTATION CONTROL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. ADDITIONAL MEASURES SHALL BE DIRECTED BY THE OWNER'S DESIGNATED REPRESENTATIVE.
9. ALL CONSTRUCTION STAKING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AT HIS EXPENSE.
10. ALL CONSTRUCTION WILL BE ON COUNTY OWNED RIGHT-OF-WAY OR EASEMENTS. ALL DEBRIS CLEARED SHALL BE HAULED OFF SITE AND DISPOSED OF WITHIN 3 CALENDAR DAYS.
11. SOIL AND EROSION CONTROL MEASURES SHALL BE INSTALLED BEFORE CONSTRUCTION BEGINS.
12. CONTRACTOR AGREES TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR THE JOB SITE DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY, AND HOLD THE OWNER REPRESENTATIVES HARMLESS FROM ANY AND ALL LIABILITY, REAL AND/OR ALLEGED, IN CONJUNCTION WITH THE PERFORMANCE OF THIS PROJECT.
13. CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY AND ALL DAMAGES TO EXISTING STRUCTURES AND UTILITIES DURING CONSTRUCTION.
14. HORIZONTAL DATUM - NAD 1983 (GA STATE PLANE COORDINATES, WEST ZONE)
VERTICAL DATUM - NAVD 1988



PROJECT AREA

**LOCATION MAP**

SCALE: N.T.S.



PROJECT LOCATION

PHASES
PHASE 1
• STORM DRAINAGE AROUND BUS SHOP
• ON-SITE GRADING (+288 CY FILL, +1121 CY CUT)
• WATER MAIN (SIZE & TYPE UNKNOWN)(±295 LF)
• GABC AROUND BUS SHOP (±2801 SY @ 12" THICK = 1765 TONS)
• CLEARING TREES (2 EACH)(PHASE 1 AREA ONLY)
• RETAINING WALL (±187 LF)
PHASE 2
• STORM DRAINAGE IN PARKING AREA
• GRADING PARKING AREA
• GABC FOR PARKING AREA
• CLEARING TREES
• GRASSING
• FILL MATERIAL
PHASE 3
• ASPHALT:
PHASE 1 - 2" 12.5mm SUPERPAVE (2801 SY = 308 TONS)
- 3" 19mm SUPERPAVE (2801 SY = 562 TONS)
PHASE 2 - 2" 12.5mm SUPERPAVE
- 3" 19mm SUPERPAVE
PHASE 4
• DRIVEWAY OVERLAY/REBUILD (±3000 SY)

LEGEND
EXISTING
90
PROPOSED
90
CONTOUR LINE
STORM DRAIN PIPE
SANITARY SEWER LINE
WATER MAIN
FENCE
GAS LINE
TREE LINE
OVERHEAD POWER LINE
SANITARY SEWER MANHOLE
STORM DRAIN MANHOLE
FIRE HYDRANT
WATER VALVE
UTILITY POLE W/GUY
WATER METER

NOTICE:
THE ENGINEER DOES NOT WARRANT, GUARANTEE NOR ASSUME RESPONSIBILITY FOR THE PRECISION OR ACCURACY OF THE CONTOURS, SOIL TYPES AND THEIR DELINEATION, PROPERTY LINES, RIGHTS-OF-WAYS, PROPERTY OWNERS AND EXISTING UTILITIES SHOWN OR REPRESENTED ON THIS PLAN. THE INFORMATION CONTAINED HEREIN IS COMPILED FROM VARIOUS SOURCES AND IS PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR AND SHALL ALWAYS BE FIELD VERIFIED IF THE NEED ARISES.

CITY OF GRAY WATER DEPT.
CHETENNE MORGAN
MOBILE: (478) 508-4571
OFFICE: (478) 986-2201



**GENERAL NOTES & LEGEND**

Revision table with columns: NO., DATE, DESCRIPTION OF REVISION. Row 1: 1, 02/23/2021, PROJECT DIVIDED INTO PHASES

INGRAM & ASSOCIATES Consulting Engineers, LLC
332 New Street Macon, Georgia 31201
(T) 478-745-3996 (F) 478-742-4690
1002 Park Avenue N. Tifton, Georgia 31793
(T) 229-387-8536 www.ingrameng.com



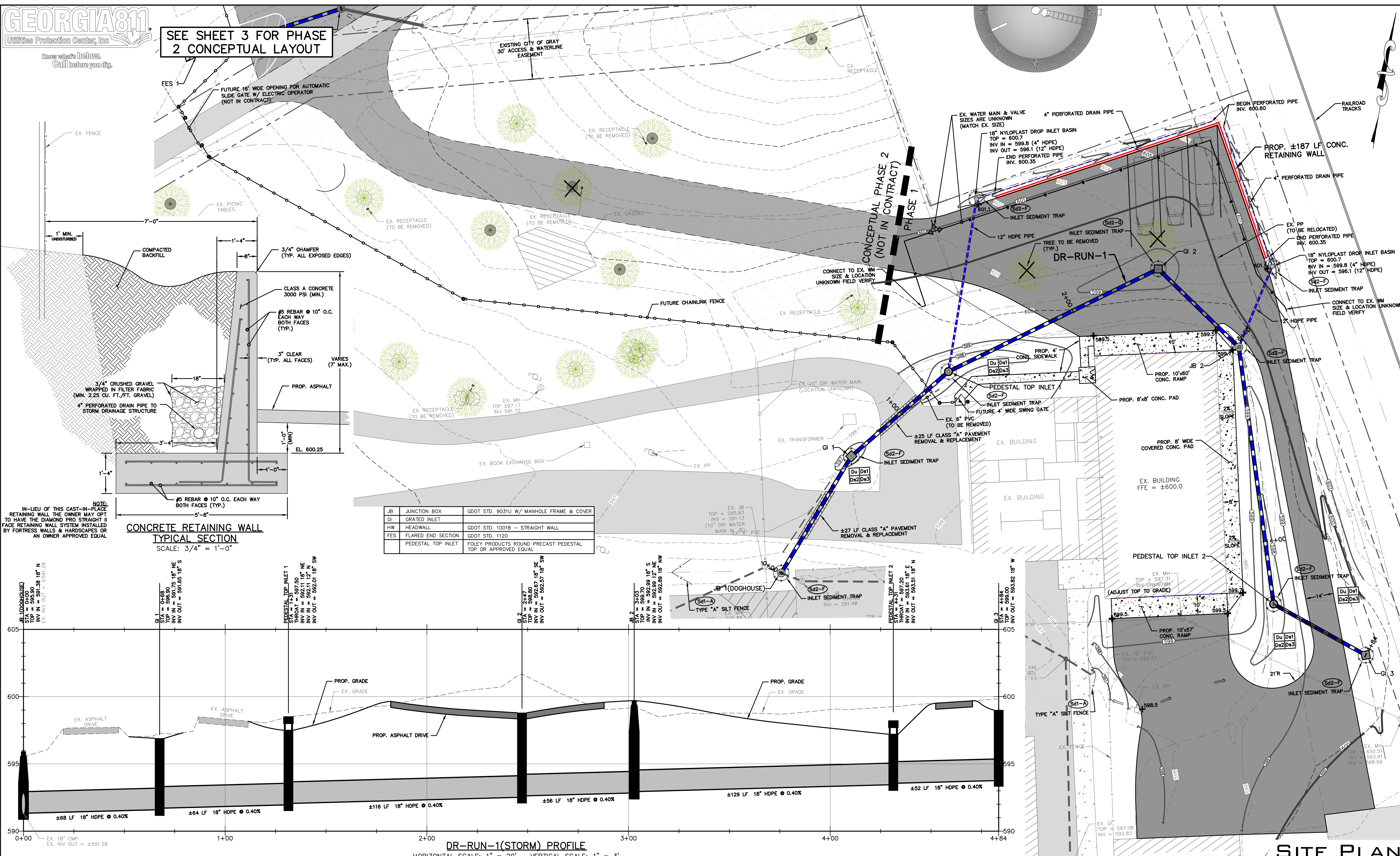
BUS PARKING & BUILDING IMPROVEMENTS FOR JONES COUNTY TRANSPORTATION OFFICE
FOR THE JONES COUNTY BOARD OF EDUCATION
JONES COUNTY, GA

Project info table with columns: PROJ. #, DSGN BY, CAD BY, CHECKED BY, DATE, SHEET #, SHT. 1 OF 6. Values: PROJ. #: 1162-003-01, DSGN BY: TI, CAD BY: KB, CHECKED BY: TI, DATE: MARCH 2021, SHEET #: 1, SHT. 1 OF 6

Drawing File: R:\CAD\CAD Projects\1162 - Jones County Board of Education\1162-003-01 Bus Shop & Gymnasium\Working Set\Bus Shop Layout.dwg

Know what's below.  
Call before you dig.

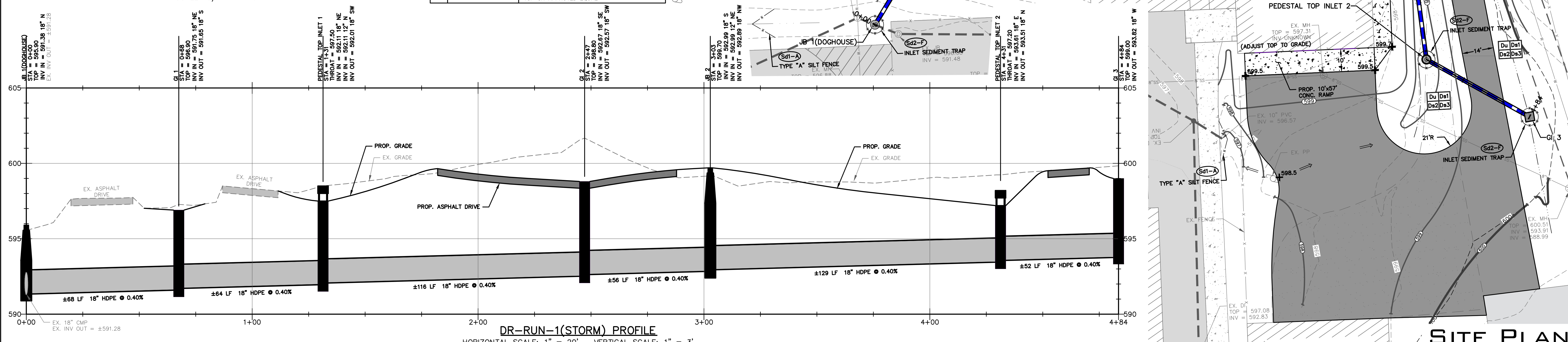
SEE SHEET 3 FOR PHASE 2 CONCEPTUAL LAYOUT



NOTE: IN-LIEU OF THIS CAST-IN-PLACE RETAINING WALL THE OWNER MAY OPT TO HAVE THE DIAMOND PRO STRAIGHT II FACE RETAINING WALL SYSTEM INSTALLED BY FORTRESS WALLS & HARDSCAPES OR AN OWNER APPROVED EQUAL

**CONCRETE RETAINING WALL TYPICAL SECTION**  
SCALE: 3/4" = 1'-0"

JB	JUNCTION BOX	GDOT STD. 9031U W/ MANHOLE FRAME & COVER
GI	GRATED INLET	
HW	HEADWALL	GDOT STD. 1001B - STRAIGHT WALL
FES	FLARED END SECTION	GDOT STD. 1120
PEDESTAL TOP INLET		FOLEY PRODUCTS ROUND PRECAST PEDESTAL TOP OR APPROVED EQUAL

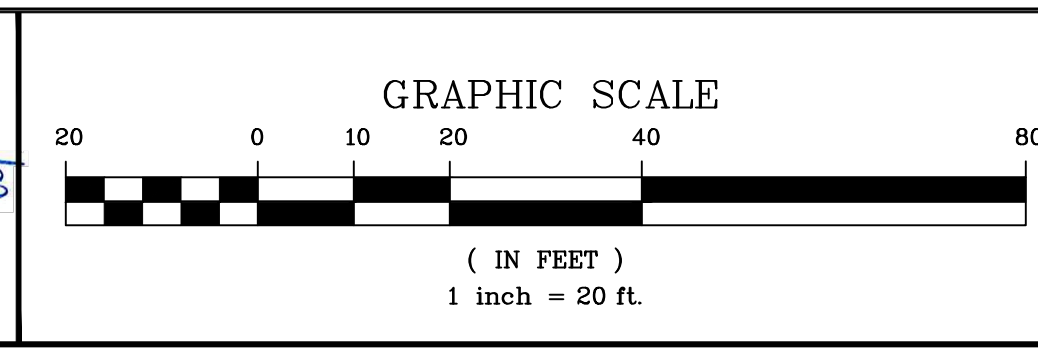
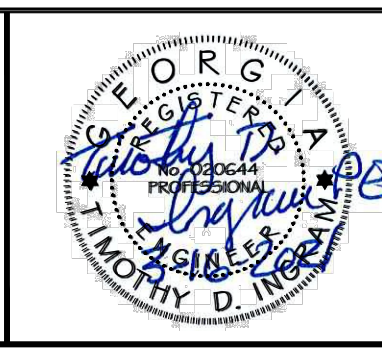


NO.	DATE	DESCRIPTION OF REVISION
1	02/23/2021	PROJECT DIVIDED INTO PHASES

**INGRAM & ASSOCIATES**  
Consulting Engineers, LLC

332 New Street  
Macon, Georgia 31201  
(T) 478-745-3996  
(F) 478-742-4690

1002 Park Avenue N.  
Tifton, Georgia 31793  
(T) 229-387-8536  
www.ingrameng.com

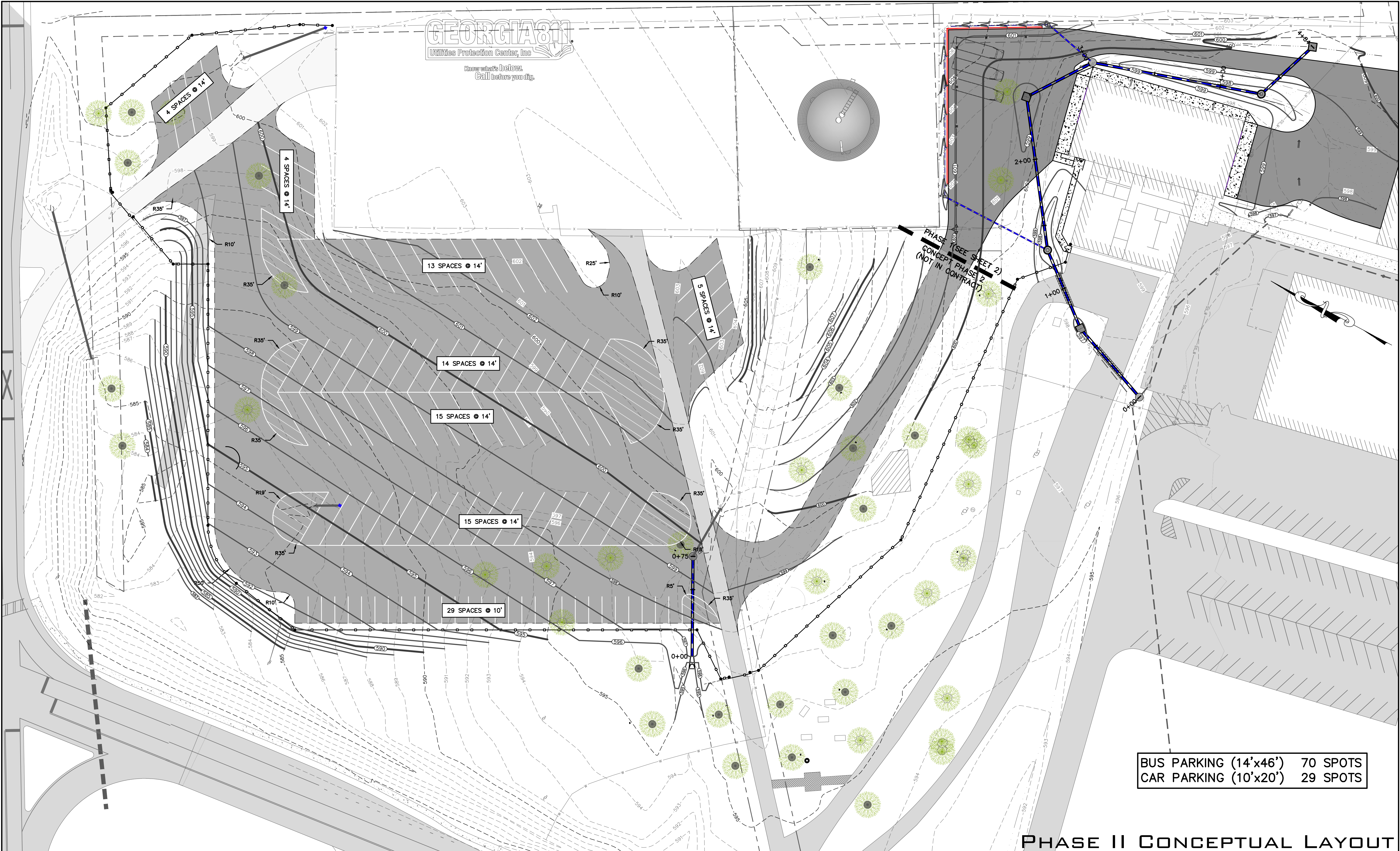
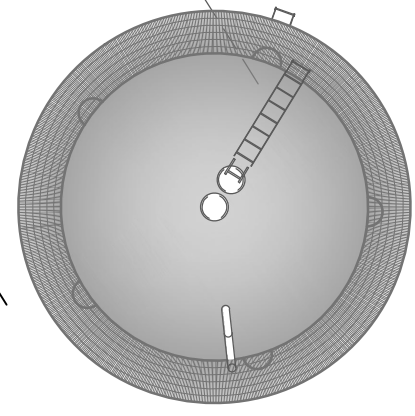


**BUS PARKING & BUILDING IMPROVEMENTS FOR JONES COUNTY TRANSPORTATION OFFICE**

FOR THE  
**JONES COUNTY BOARD OF EDUCATION**  
JONES COUNTY, GA

PROJ. #: 1162-003-01  
DSGN BY: TI  
CAD BY: KG  
CHECKED BY: TI  
DATE: MARCH 2021

SHEET #:  
**2**  
SHT. 2 OF 6



**BUS PARKING (14'x46') 70 SPOTS**  
**CAR PARKING (10'x20') 29 SPOTS**

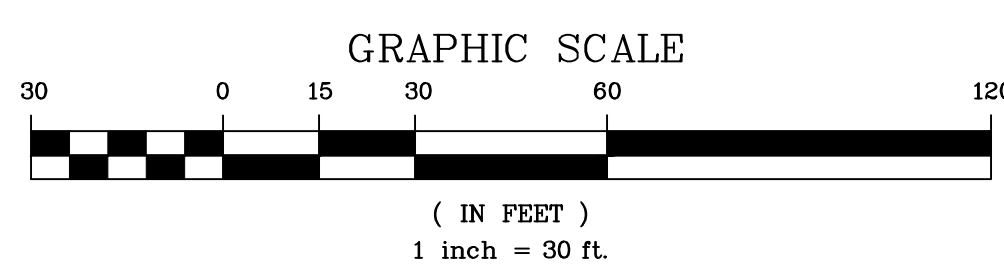
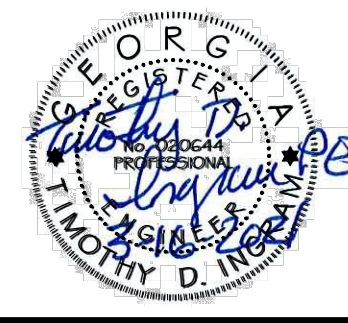
**PHASE II CONCEPTUAL LAYOUT**

NO.	DATE	DESCRIPTION OF REVISION
1	02/23/2021	PROJECT DIVIDED INTO PHASES

**INGRAM & ASSOCIATES**  
 Consulting Engineers, LLC

332 New Street  
 Macon, Georgia 31201  
 (T) 478-745-3996  
 (F) 478-742-4690

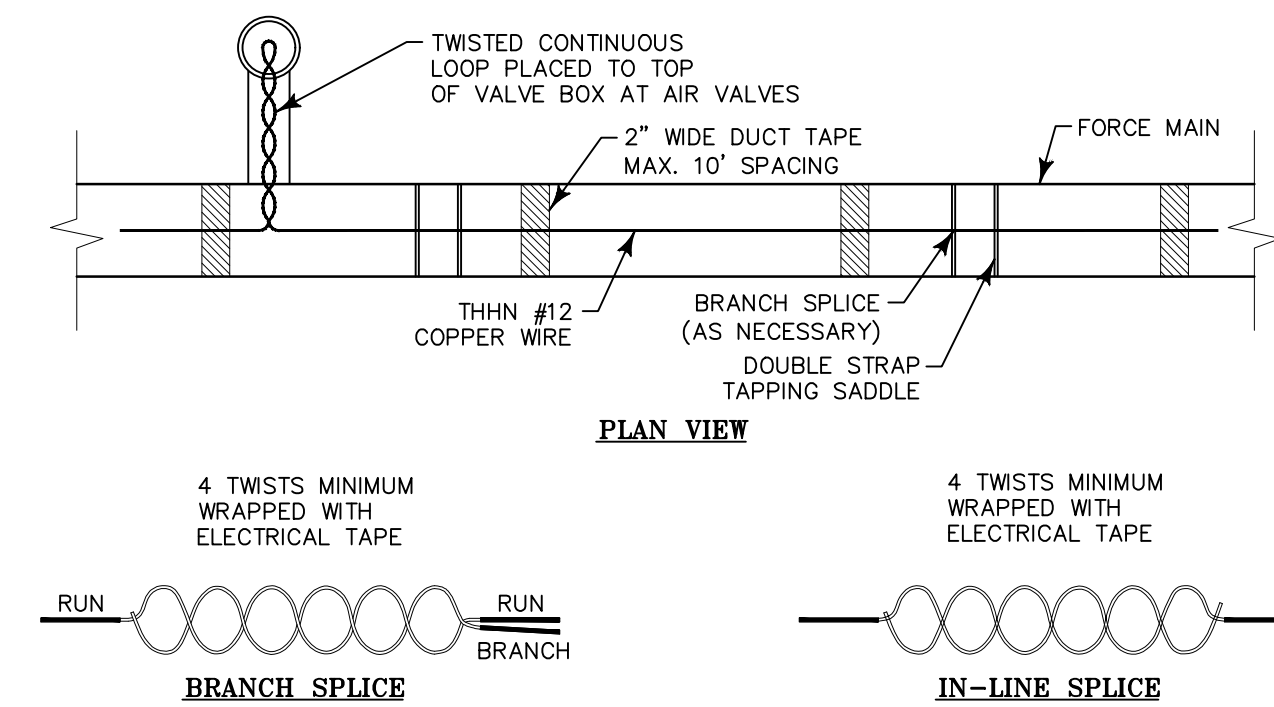
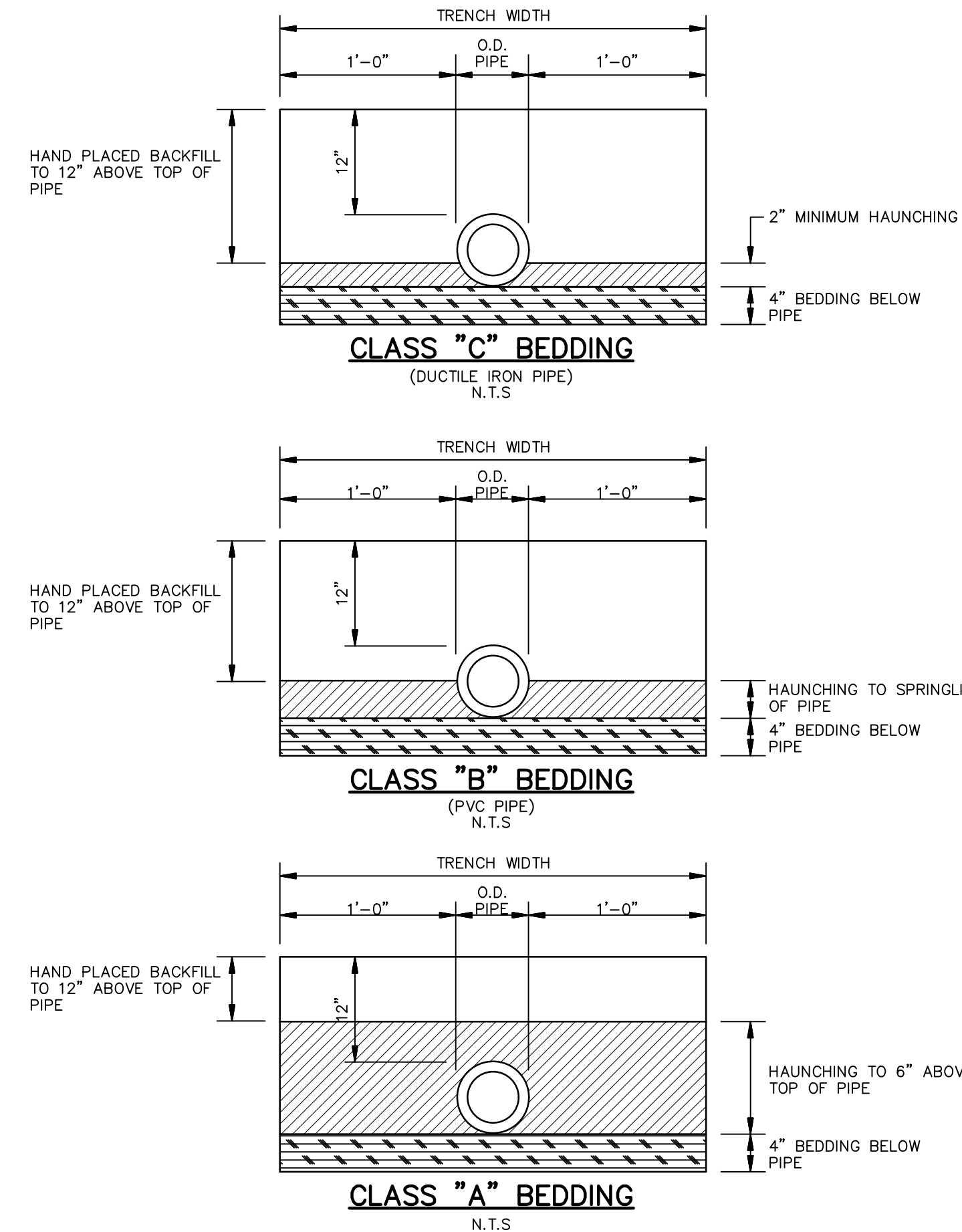
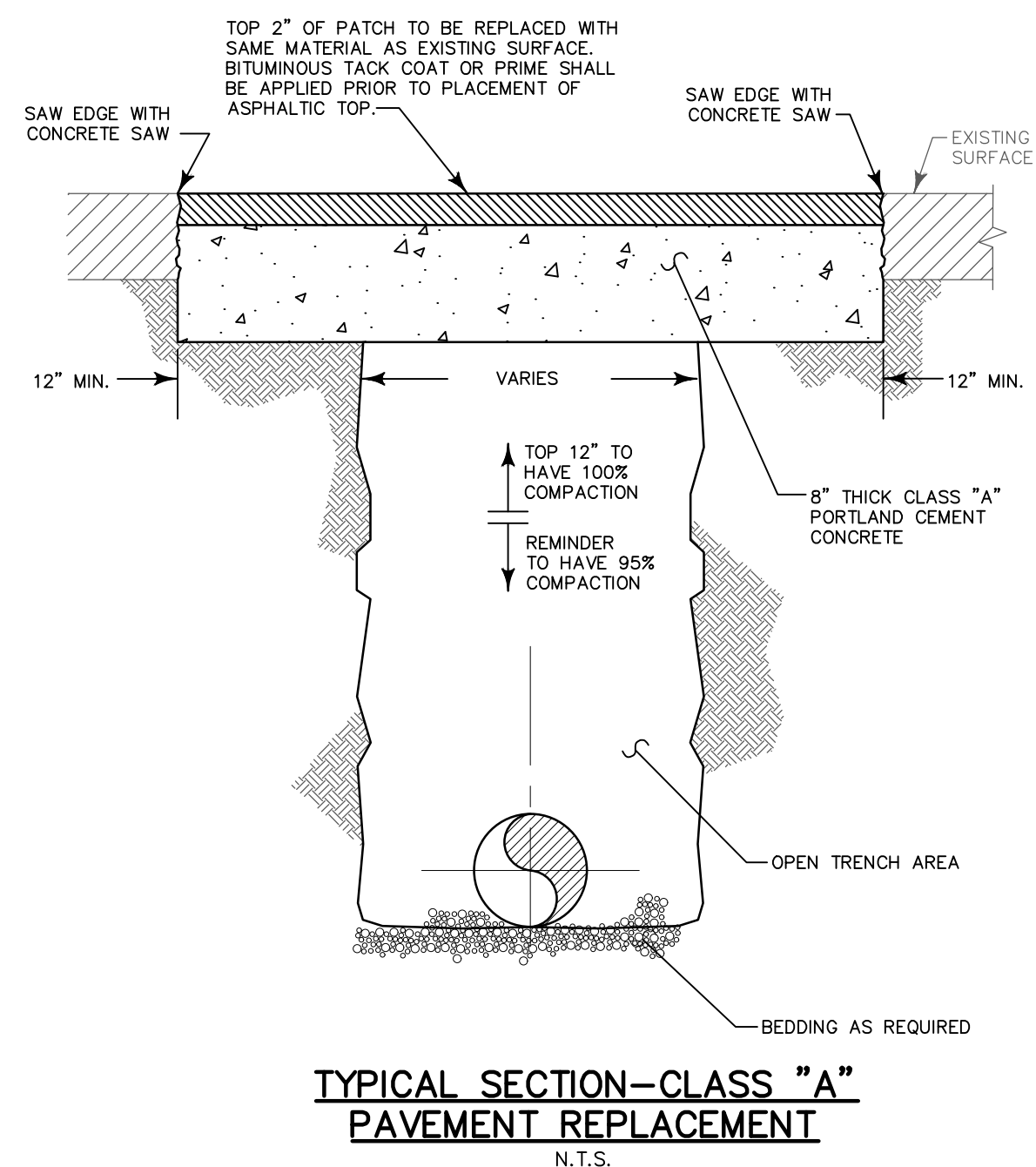
1002 Park Avenue N.  
 Tifton, Georgia 31793  
 (T) 229-387-8536  
 www.ingrameng.com



**BUS PARKING & BUILDING IMPROVEMENTS**  
**FOR JONES COUNTY TRANSPORTATION OFFICE**  
 FOR THE  
**JONES COUNTY BOARD OF EDUCATION**  
 JONES COUNTY, GA

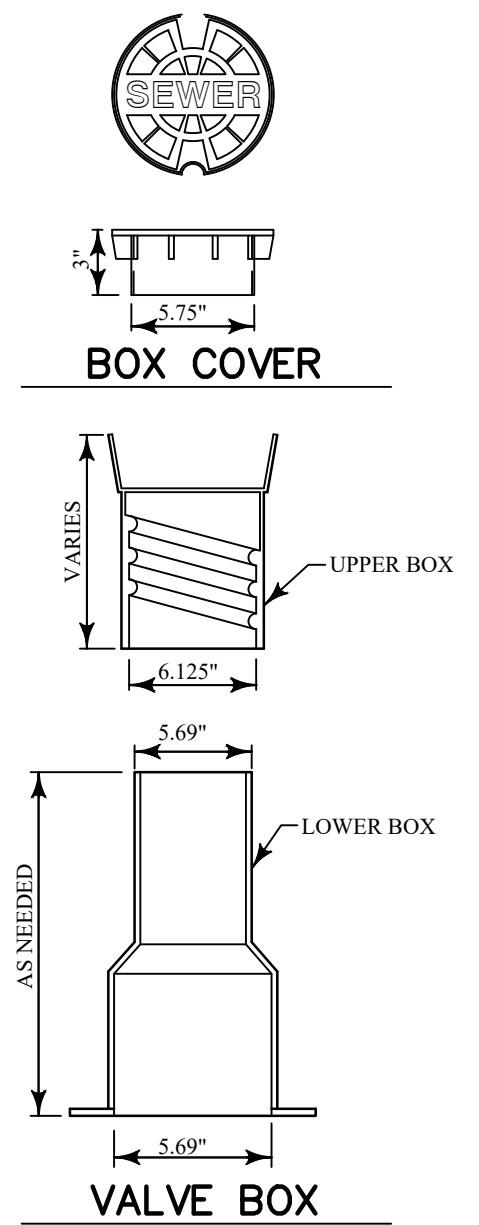
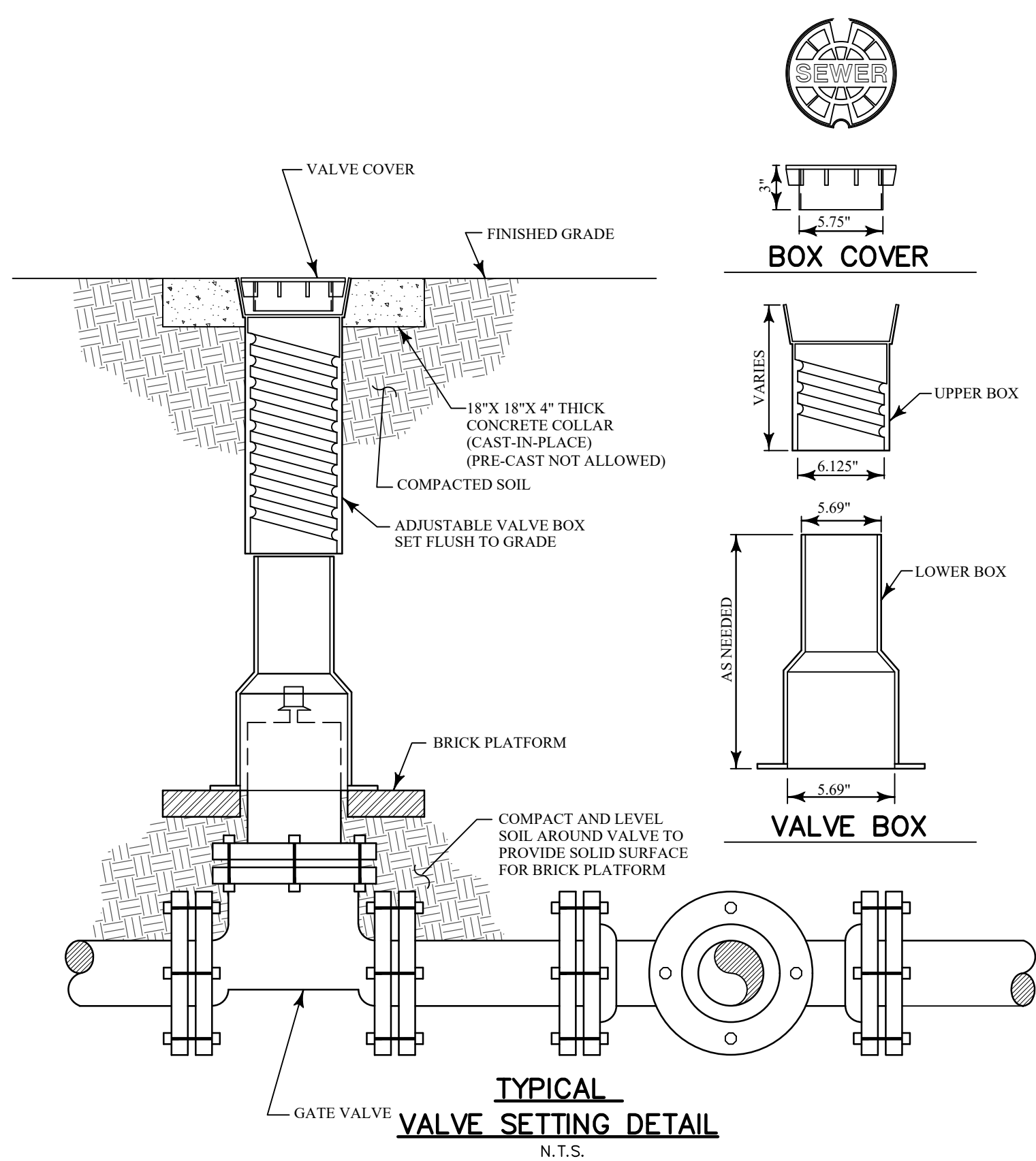
PROJ. #:	1162-003-01	SHEET #:	<b>3</b>
DSGN BY:	TI		
CAD BY:	KB		
CHECKED BY:	TI		
DATE:	MARCH 2021	SHT.	3 OF 6

Drawing File: R:\CAD\CAD Projects\1162 - Jones County Board of Education\1162-003-01 Bus Shop & Gymnasium Working Set\Bus Shop Layout.dwg  
 THIS LINE IS ONE INCH LONG WHEN PLOTTED FULL SCALE



NOTE:  
1. PROTECTIVE COATING SHALL BE STRIPPED PRIOR TO SPLICE. WRAP FINISHED SPLICE WITH ELECTRICAL TAPE.  
**TYPICAL TRACER WIRE PLACEMENT-FORCE MAIN**  
N.T.S.

TYPICAL BEDDING REQUIREMENTS



BENDS			
	X	C	D
90° BEND	4"	6"	1'-2"
	6"	8"	1'-10"
	8"	9"	2'-4"
	10"	11"	3'-0"
	12"	12"	3'-6"

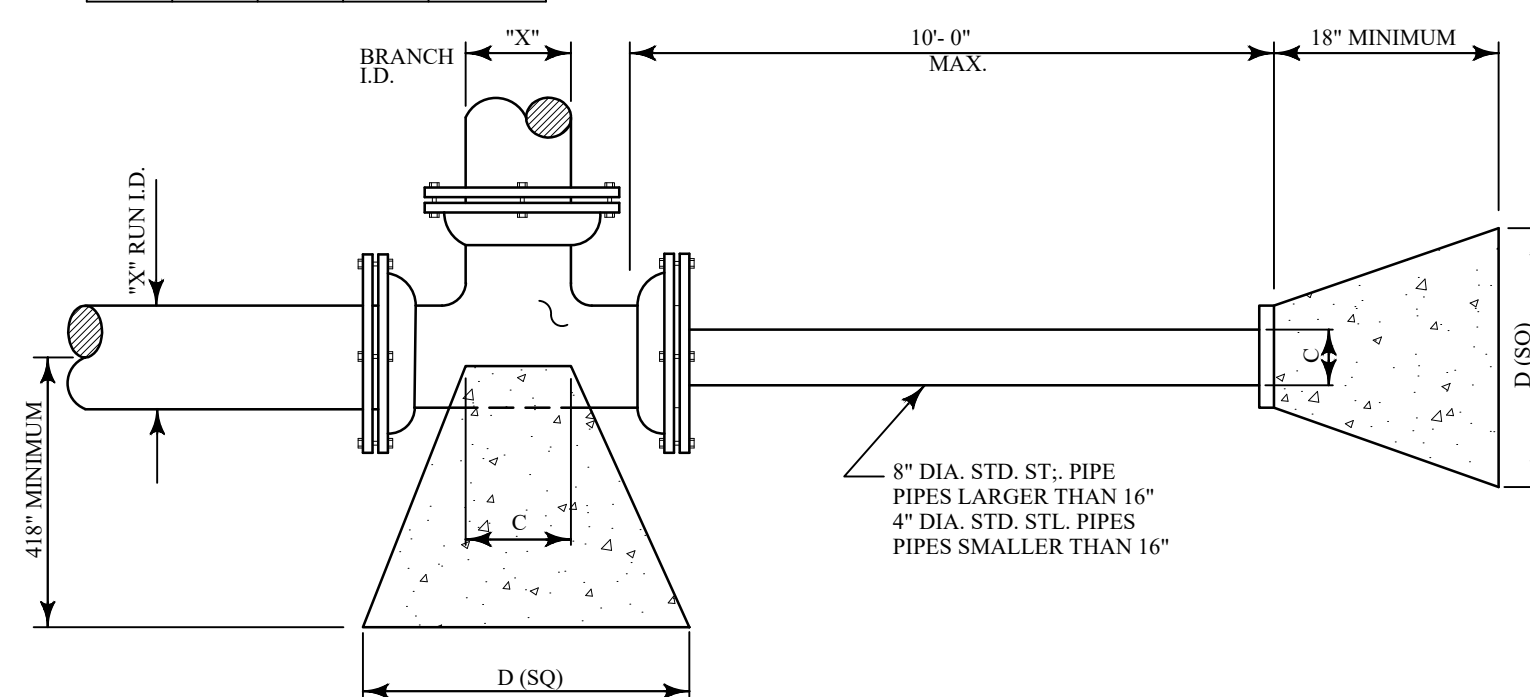
22 1/2° BEND			
	X	C	D
22 1/2° BEND	4"	6"	1'-0"
	6"	8"	1'-0"
	8"	9"	1'-4"
	10"	11"	1'-8"
	12"	12"	1'-10"

45° BEND			
	X	C	D
45° BEND	4"	6"	1'-0"
	6"	8"	1'-4"
	8"	9"	1'-10"
	10"	11"	2'-2"
	12"	12"	2'-8"

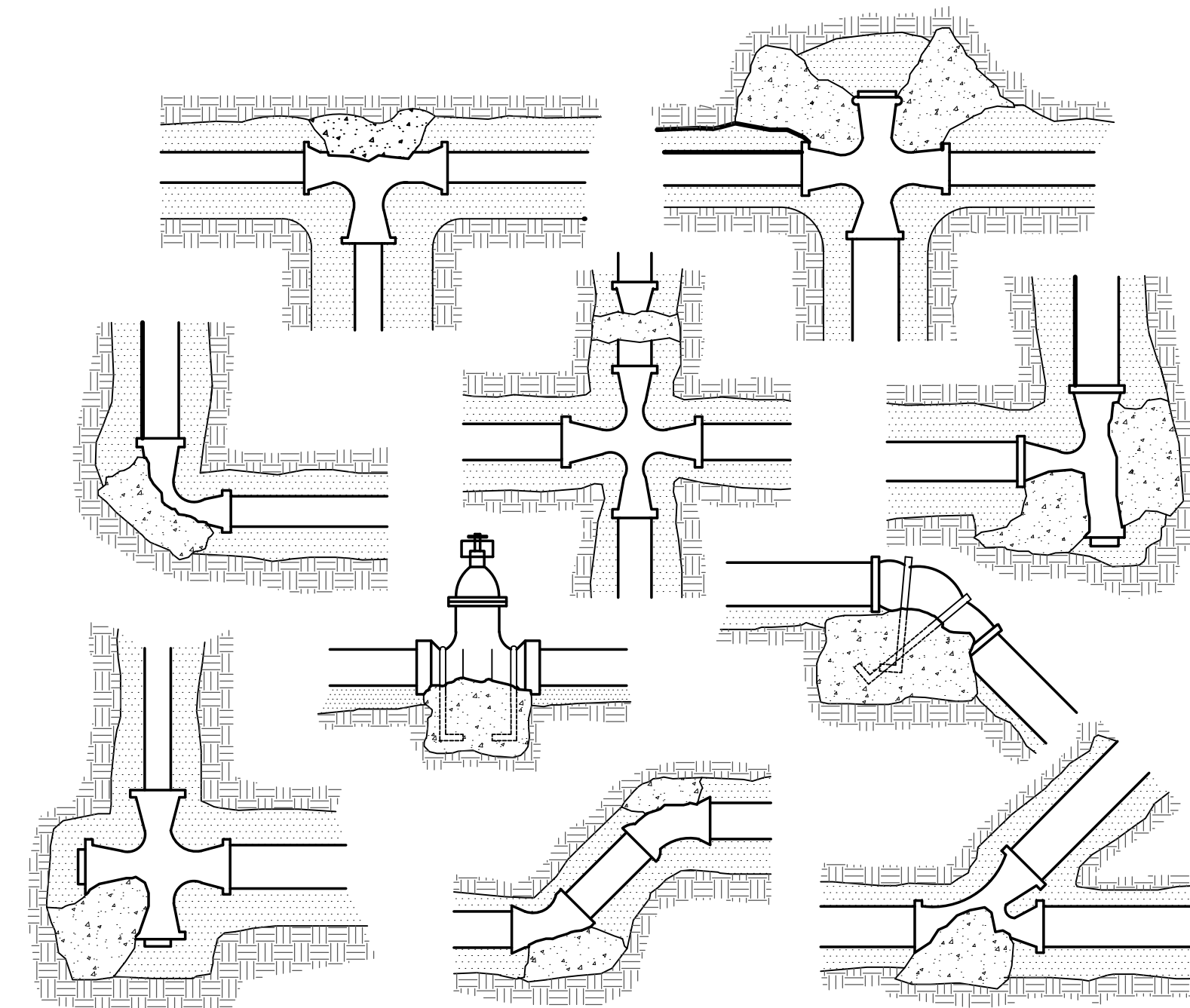
11 1/4° BEND			
	X	C	D
11 1/4° BEND	4"	6"	1'-0"
	6"	8"	1'-0"
	8"	9"	1'-0"
	10"	11"	1'-2"
	12"	12"	1'-4"

TEES AND DEAD ENDS			
X	C	D	
4"	8"	1'-6"	
6"	10"	1'-9"	
8"	12"	2'-0"	
10"	14"	2'-6"	
12"	16"	3'-0"	

NOTE:  
150 P.S.I. TEST PRESSURE  
SOIL BORING OF 2000 P.S.F.  
3000 P.S.I. CONCRETE  
ALL C AND D'S HAVE MIN. OF 1'-0"



TYPICAL THRUST BLOCKS FOR FITTINGS DETAIL  
N.T.S.

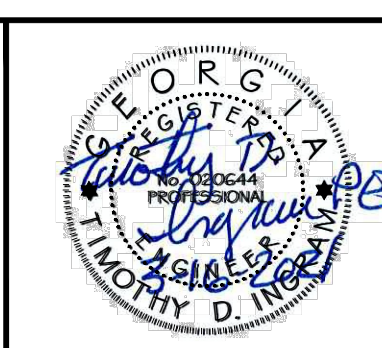


THRUST BLOCKS LOCATIONS DETAIL  
N.T.S.

MISCELLANEOUS DETAILS

NO.	DATE	DESCRIPTION OF REVISION

**INGRAM & ASSOCIATES**  
Consulting Engineers, LLC  
332 New Street Macon, Georgia 31201  
(T) 478-745-3996 (F) 478-742-4690  
1002 Park Avenue N. Tifton, Georgia 31793  
(T) 229-387-8536 www.ingrameng.com

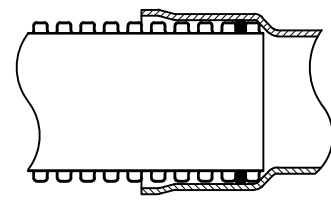


**BUS PARKING & BUILDING IMPROVEMENTS**  
**FOR JONES COUNTY TRANSPORTATION OFFICE**  
FOR THE  
**JONES COUNTY BOARD OF EDUCATION**  
JONES COUNTY, GA

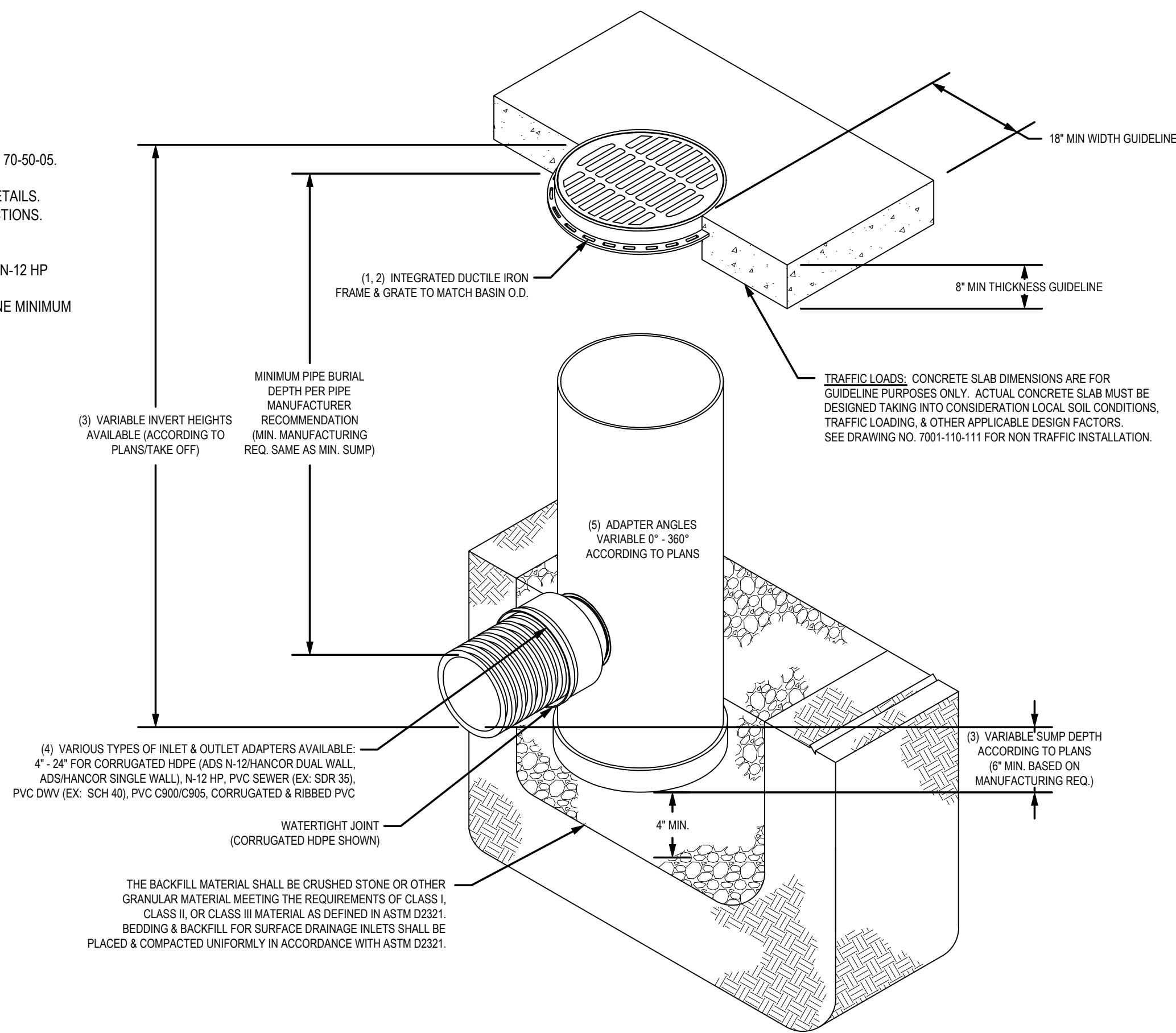
PROJ. #:	1162-003-01	SHEET #:	4
DSGN BY:	TI		
CAD BY:	KB		
CHECKED BY:	TI		
DATE:	MARCH 2021	SHT.	4 OF 6

Drawing File: R:\CAD\CAD Projects\1162 - Jones County Board of Education\1162-003-01 Bus Shop & Gymnasium\Working Set\Bus Shop Layout.dwg  
THIS LINE IS ONE INCH LONG WHEN PLOTTED FULL SCALE

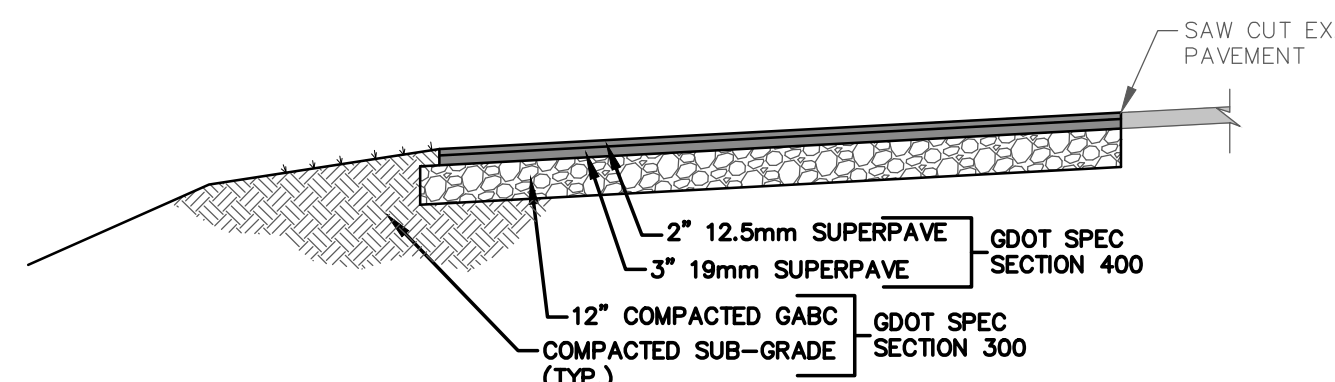
- 1 - GRATES/SOLID COVER SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
- 2 - FRAMES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
- 3 - DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS. RISERS ARE NEEDED FOR BASINS OVER 84" DUE TO SHIPPING RESTRICTIONS. SEE DRAWING NO. 7001-110-065.
- 4 - DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS N-12/HANCOR DUAL WALL), N-12 HP & PVC SEWER.
- 5 - ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0° TO 360°. TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. 7001-110-012.



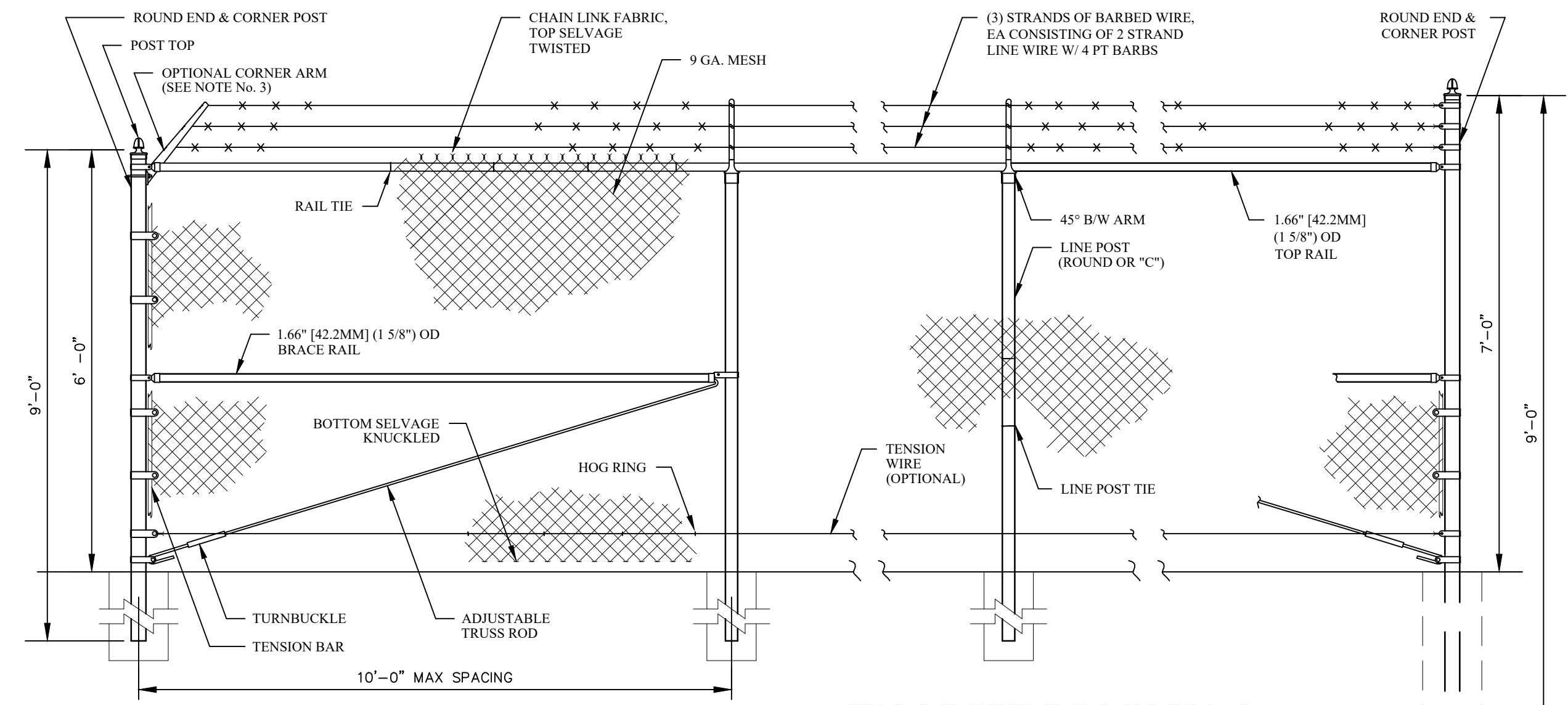
GRATE OPTIONS	LOAD RATING	PART #	DRAWING #
PEDESTRIAN	MEETS H-10	2499GCP	7001-110-216
STANDARD	MEETS H-20	2499GCS	7001-110-217
SOLID COVER	MEETS H-20	2499GCG	7001-110-218
DOME	N/A	2499GCD	7001-110-219
DROP IN GRATE	LIGHT DUTY	2401DI	7001-110-075



**NYLOPLAST 24" DRAIN BASIN**  
N.T.S.



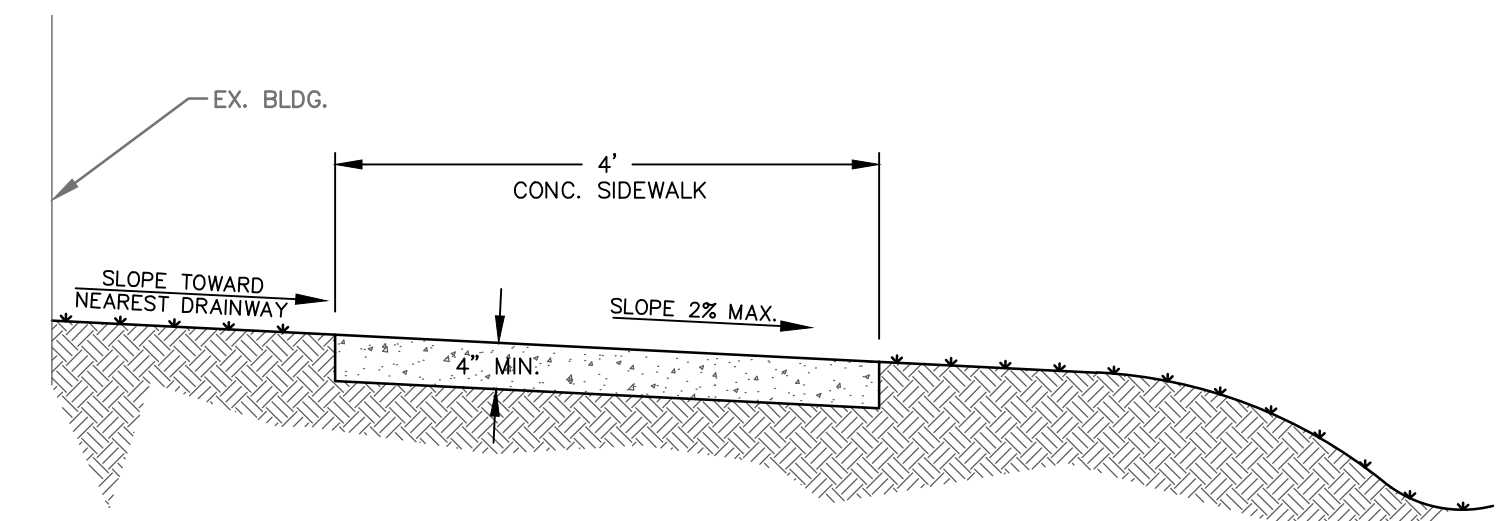
**PAVEMENT TYPICAL SECTION**  
N.T.S.



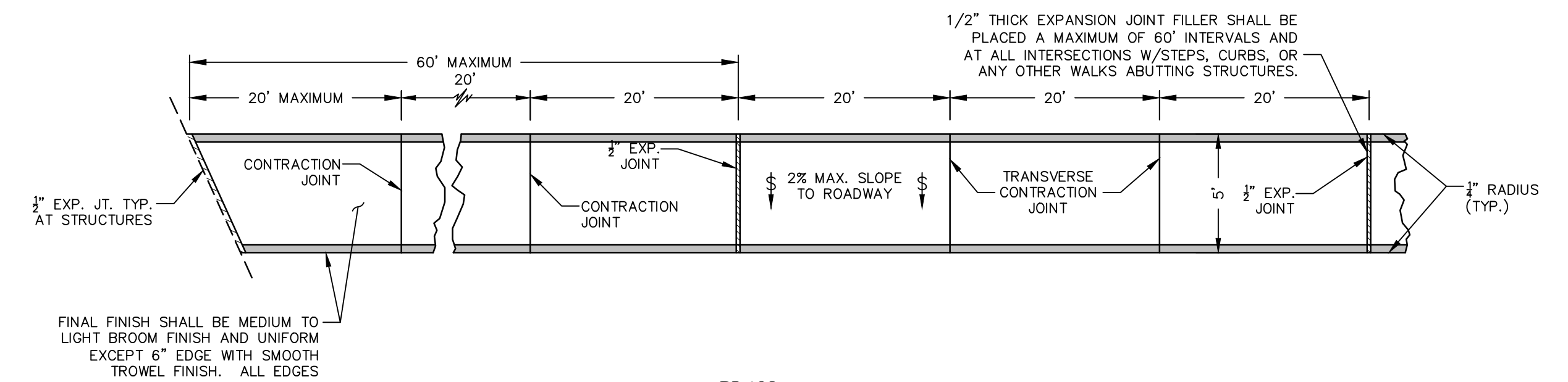
**FENCE SECTION ELEVATION - ROUND END POSTS**

- NOTES:**
1. METRIC DIMENSIONS ARE NOMINAL EQUIVALENTS TO U.S. DIMENSIONS.
  2. FOOTING WIDTH TO BE (4X) POST WIDTH. MINIMUM DEPTH 36" [914MM].
  3. 3-STRAND BARBED WIRE SHALL ANGLE AWAY FROM FENCE TO THE EXTERIOR OF THE ENCLOSED AREA.

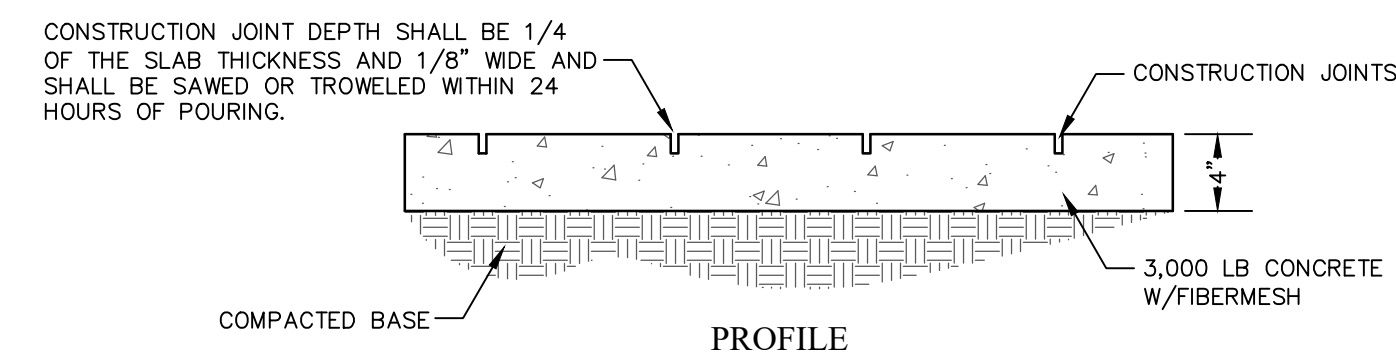
**CHAIN LINK FENCE DETAIL**  
N.T.S.



**SECTION**



**PLAN**



**PROFILE**

**TYPICAL SIDEWALK DETAIL**  
N.T.S.

- NOTES:**
1. CONCRETE TO BE PLACED 4" THICK AND FINISHED WITH TAMPS, WOOD FLOATS AND STIFF-BRISTLE BROOMS.
  2. TRANSVERSE CONTRACTION JOINTS SHALL BE PLACED AT 20 FT. INTERVALS. ALL EDGES TO BE ROUNDED TO 1/2" RADIUS.
  3. 1/2" EXPANSION JOINTS SHALL BE PLACED, WHERE SIDEWALK TIE INTO A STRUCTURE OR TERMINATE AT CURB, RAMPS OR DRIVEWAYS AND AT 60' INTERVALS.

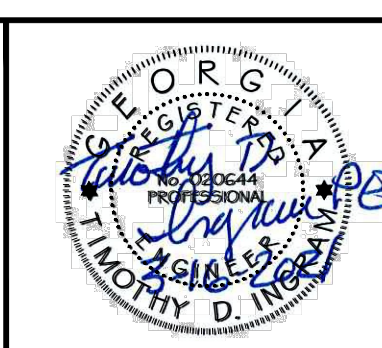
**MISCELLANEOUS DETAILS**

NO.	DATE	DESCRIPTION OF REVISION

**INGRAM & ASSOCIATES**  
Consulting Engineers, LLC

332 New Street  
Macon, Georgia 31201  
(T) 478-745-3996  
(F) 478-742-4690

1002 Park Avenue N.  
Tifton, Georgia 31793  
(T) 229-387-8536  
www.ingrameng.com



**BUS PARKING & BUILDING IMPROVEMENTS**  
**FOR JONES COUNTY TRANSPORTATION OFFICE**

FOR THE  
**JONES COUNTY BOARD OF EDUCATION**  
JONES COUNTY, GA

PROJ. #:	1162-003-01	SHEET #:	5
DSGN BY:	TI		
CAD BY:	KB		
CHECKED BY:	TI		
DATE:	MARCH 2021	SHT.	5 OF 6

Drawing File: R:\CAD\CAD Projects\1162 - Jones County Board of Education\1162-003-01 Bus Shop & Gymnasium\Working Set\Bus Shop Layout.dwg  
THIS LINE IS ONE INCH LONG WHEN PLOTTED FULL SCALE

Drawing File: R:\CAD\CAD Projects\1162 - Jones County Board of Education\1162-003-01 Bus Shop & Gymnasium\Working Set\Bus Shop Layout.dwg  
THIS LINE IS ONE INCH LONG WHEN PLOTTED FULL SCALE

### D52 Disturbed Area Stabilization (With Temporary Seeding)

#### PURPOSE

- To reduce runoff and sediment damage of downstream resources
- To protect the soil surface from erosion
- To improve wildlife habitat
- To improve aesthetics
- To improve infiltration and aeration as well as organic matter for permanent plantings.

**REQUIREMENT FOR REGULATORY COMPLIANCE:** Much or temporary grassing shall be applied to all exposed areas within 14 days of disturbance. Temporary grassing, instead of mulch, can be applied to rough graded areas that will be exposed for less than six months. If an area is expected to be undisturbed for longer than six months, permanent perennial vegetation shall be used. If optimum planting conditions for temporary grassing is lacking, mulch can be used as a singular erosion control device for up to six months but it shall be applied at an appropriate depth, anchored, and have a continuous 90% cover or greater or the soil surface. Refer to specification D51 - Disturbed Area Stabilization (With Temporary Seeding).

**CONDITIONS:** Temporary vegetative measures should be coordinated with permanent measures to assure economical and effective stabilization. For linear construction projects on land, permanent vegetation is ideal to use as companion crops until the permanent vegetation is established. Note: Some species are operational, interim stabilization measures and companion crop plantings because of their potential to out-compete the desired species (e.g. annual ryegrass). Contact NRC or the local SWCD for more information.

#### SPECIFICATIONS

##### Grading and Shaping

Excessive water run-off shall be reduced by properly grading and installed erosion control practices such as closed drains, ditches, dikes, diversions, sediment barriers and others.

No shoring or grading is required if slopes can be stabilized by hand-seeded vegetation or if hydraulic seeding equipment is to be used.

**Seeded Preparation:** When a hydraulic seeder is used, seeded preparation is not required. When using conventional or hand-seeding, seeded preparation is not required if the soil material is loose and not sealed by rainfall.

When soil has been seeded by rainfall or consists of smooth cut slopes, the soil shall be plowed, trenched or otherwise scarified to provide a place for seed to lodge and germinate.

##### Lime and Fertilizer

Agriculture lime is required unless soil tests indicate otherwise. Apply agricultural lime at a rate of one ton per acre. Graded areas require lime application. Soil can be tested to determine if fertilizer is needed. On reasonably fertile soils or soil material, fertilizer is not required. For soils with very low fertility, 200 to 700 pounds of 10-10-10 fertilizer or the equivalent per acre (12-16 lbs./1000 sq.ft.) shall be applied. Fertilizer should be applied before land preparation and incorporated with a disk, ripper or chisel.

##### Mulching

Temporary vegetation can, in most cases, be established without the use of mulch. Mulch without seeding should be considered for short term protection. Refer to D51 - Disturbed Area Stabilization (With Seeding Only).

##### Irrigation

During times of drought, water shall be applied at a rate not causing runoff and erosion. The soil shall be thoroughly wetted to a depth that will insure germination of the seed. Subsequently applications should be made when needed.

### D53 Disturbed Area Stabilization (With Permanent Vegetation)

#### PURPOSE

- To protect the soil surface from erosion
- To reduce damage from sediment and runoff to downstream areas
- To improve wildlife habitat and visual resources
- To improve aesthetics

**REQUIREMENT FOR REGULATORY COMPLIANCE:** This practice shall be applied immediately to rough graded areas that will be undisturbed for longer than six months. This practice or sodding shall be applied immediately to all areas of final grade. Final Stabilization means that all soil disturbing activities at the site have been completed, and that for ungraded areas and areas not covered by vegetation appropriate for the region, such that within the growing season a 70% coverage by perennial vegetation is achieved. Final stabilization applies to each phase of construction. For linear construction projects on land used for agricultural or silvicultural use, until this standard is satisfied and permanent control measures and facilities are operational, interim stabilization measures and temporary erosion and sedimentation control measures shall not be removed.

#### CONDITIONS

Permanent perennial vegetation is used to provide a protective cover for exposed areas including cuts, fills, dams, and other denuded areas.

#### PLANNING CONSIDERATIONS

1. Use conventional planting methods where possible.
2. When mixed plantings are done during marginal planting periods, companion crops shall be used.
3. No-tilt planting is effective when planting is done following a summer or winter annual cover crop. Sericea lespedeza planted no-tilt in stands of rye is an excellent procedure.
4. Block sod provides immediate cover. It is especially effective in controlling erosion adjacent to concrete flumes and other structures. Refer to Specification D54 - Disturbed Area Stabilization (With Sodding).
5. Irrigation should be used when the soil is dry or when summer plantings are done.
6. Low maintenance plants, as well as natives, should be used to ensure long-lasting erosion control.
7. Mowing should not be performed during the quiet nesting season (12-16 lbs./1000 sq.ft.) shall be applied.
8. Wildlife plantings should be included in critical area plantings.

#### Wildlife Plantings

Commercially available plants beneficial to wildlife species include the following:  
**Must Bearing Trees:** Beech, Black Cherry, Blackgum, Chestnut, Chinquapin, Hackberry, Hickory, Honey Locust, Native Oak, Pearmain, Sawtooth Oak and Sweetgum. All trees that produce nuts or fruits are favored by many game species. Hickory provides nuts used mainly by squirrels and bear.

#### Shrubs and Small Trees

Bayberry, Bicolor Lespedeza, Crabapple, Dogwood, Hackberry, or Native Blueberry, Mountain Laurel, Native Holly, Red Cedar, Red Mulberry, Sumac, Wax Myrtle, Wild Plum and Blackberry.

Plant in patches without tall trees to develop stable shrub communities. All produce fruits used by many kinds of wildlife, except for lespedeza which produces seeds used by quail and songbirds.

#### Grasses, Legumes, Vines and Temporary Cover

Bahiagrass, Bermudagrass, Grass-Legume mixtures, Partridge Pea, Annual Lespedeza, Orchardgrass (for mountains), Browntop Millet (for temporary cover), and Native grasses.

Provides herbaceous cover in clearings for a game bird brood-rearing habitat. Appropriate legumes such as vetches, clovers, and lespedezas may be mixed with grass, but they may die out after a few years.

#### CONSTRUCTION SPECIFICATIONS

##### Grading and Shaping

Grading and shaping may not be required where hydraulic seeding and fertilizing equipment is to be used. Vertical banks shall be sloped to enable plant establishment.

When conventional seeding and fertilizing are to be done, grade and shape where feasible and practical, so that equipment can be used safely and efficiently during seeded preparation, seeding, mulching and maintenance of the vegetation.

Concentrations of water that will cause excessive soil erosion shall be diverted to a safe outlet. Diversions and other treatment practices shall conform with the appropriate standards and specifications.

##### Lime and Fertilizer Rates and Analysis

Agriculture lime is required at the rate of one to two tons per acre unless soil tests indicate otherwise. Graded areas require lime application. If lime is applied within six months of planting permanent perennial vegetation, additional lime is not required. Agriculture lime shall be within the specifications of the Georgia Department of Agriculture.

"Lime spread by conventional equipment shall be ground limestone." Ground limestone is calcitic or dolomitic limestone ground so that 90 percent of the material will pass through a 10-mesh sieve, not less than 50 percent will pass through a 50-mesh sieve and not less than 25 percent will pass through a 100-mesh sieve. Agriculture lime spread by hydraulic seeding equipment shall be "finely ground limestone." Finely ground limestone is calcitic or dolomitic limestone ground so that 98 percent of the material will pass through a 20-mesh sieve and not less than 70 percent will pass through a 100-mesh sieve.

##### Lime and Fertilizer Application

Agriculture lime is required at the rate of one, if needed, and wood cellulose or wood pulp fiber mulch and applied in a slurry. The incoherent, if needed, shall be mixed with the seed prior to being placed into the hydraulic seeder. The slurry mixture will be applied during application to keep the ingredients thoroughly mixed. The mixture will be spread uniformly over the area within one hour after being placed in the hydraulic seeder.

Finely ground limestone will be mixed with water and applied immediately after mulching is completed or in combination with the top dressing. When conventional planting is to be done, lime and fertilizer shall be applied uniformly in one of the following ways:

#### Broadcast Planting

1. Tillage to a minimum, shall adequately loosen the soil to a depth of 4 to 6 inches; allocate concavities; incorporate lime or fertilizer, unless and the soil, allow for the watering of straw or hay mulch if it is to be used.
2. Tillage may be done with any suitable equipment.
3. Tillage should be done on the contour where feasible.
4. Do not step for the sake of operation of tillage equipment, the soil surface shall be plowed or trenched across the slope with appropriate hand tools to provide two places 6 to 8 inches apart in which seed may lodge and germinate. Hydraulic seeding may also be used.

#### Plant Selection

1. Refer to Tables 4.1, 6.2.2, 6.4.3 and 6.4.4 for approved species. Species not listed shall be approved by the State Resource Conservation of the Natural Resources Conservation Service before they are used.
2. Plants shall be selected on the basis of species characteristics, site and soil conditions, planned use and maintenance of the area, time of year of planting method of planting, and the needs and desires of the land user. Some perennial species are easily established and can be planted alone.
3. Examples of these are Common Bermuda, Tall Fescue, and Weeping Lovegrass.
4. Other perennials, such as Bahiagrass and Sericea Lespedeza, are slow to become established and should be planted with another perennial.
5. The additional species will provide quick cover and ample soil protection until the target perennial species become established.

Annual companion crops should be used only when the perennial species are not planted during the optimum planting period. A common mixture is Browntop Millet with Common Bermuda in mid-summer. Care should be taken in selecting companion crop species and seeding rates because annual crops will compete with perennial species for water, nutrients, and growing space. A high seeding rate of the companion crop may prevent the establishment of perennial species.

Plant selection may also include annual companion crops. Annual companion crops should be used only when the perennial species are not planted during the optimum planting period. A common mixture is Browntop Millet with Common Bermuda in mid-summer. Care should be taken in selecting companion crop species and seeding rates because annual crops will compete with perennial species for water, nutrients, and growing space. A high seeding rate of the companion crop may prevent the establishment of perennial species.

All incoherent seed that is protected from the sun and soil temperatures and shall be planted the same day incoherently. No incoherent seed shall remain incoherent longer than one hour.

#### Hydraulic Seeding

Mix the seed (incorporated if needed), fertilizer, and wood cellulose or wood pulp fiber mulch with water and apply in a slurry uniformly over the area to be seeded. Apply within one hour after the mixture is made.

#### Conventional Seeding

Seeding will be done on a freshly prepared and firmed seedbed. For broadcast planting, use a cataplack-seeder, drill, rotary seeder, other mechanical seeder, or hand seeding to distribute the seed uniformly over the area to be seeded. Cover the seed lightly with 3/8" of soil for small seed and 1/2" to 1" for large seed when using a cataplack or other suitable equipment. The seed must be uniformly distributed and planted at the proper depth.

#### No-Till Seeding

No-tilt seeding is permissible into annual cover crops when planting is done following maturity of the cover crop or if the temporary cover used is sparse enough to allow adequate growth of the permanent (perennial) species. No-tilt seeding shall be done with appropriate no-tilt seeding equipment. The seed must be uniformly distributed and planted at the proper depth.

#### Individual Plants

Shrubs, vines and spring may be planted with appropriate planters or hand tools. Pine trees shall be planted manually in the subsoil furrow. Each plant shall be set in a manner that will avoid crowding the roots. Nursery stock plants shall be planted in the same depth or slightly deeper than they grew at the nursery. The top of vines and springs must be at or slightly above the ground surface.

Where individual holes are dug, fertilizer shall be placed in the bottom of the hole, two inches of soil shall be added and the plant shall be set in the hole.

**NOTE:** FERTILE PERMANENT GRASS SPECIES IS COMMON BERMUDEA.

#### D51 Mulching

Mulch is required for all permanent vegetation applications. Mulch applied to seed areas shall achieve 75% soil cover. Select the mulching material from the following and apply as directed:

1. Dry straw or dry hay of good quality and free of weed seeds can be used. Dry straw shall be applied at the rate of 2 tons per acre. Dry hay shall be applied at a rate of 2 1/2 tons per acre.
2. Fertilizer granules or wood pulp fiber shall be used with hydraulic seeding. It shall be applied at the rate of 500 pounds per acre. Dry straw or dry hay shall be applied at a rate indicated above after hydraulic seeding.
3. One thousand pounds of wood cellulose or wood pulp fiber, which includes a tackifier, shall be used with hydraulic seeding on slopes 6:1 or steeper.
4. Sericea lespedeza hay containing nutcracker seeds shall be applied at a rate of three tons per acre.
5. Four thousand pounds of tackifier shall be applied at a thickness of 3 inches for bedding purposes. Other suitable materials in sufficient quantity may be used where circumstances or other ground cover are planned. This is not appropriate for seed areas.
6. When using temporary erosion control blankets or block sod, mulch is not required.
7. Dimensional treated roofing may be applied on planted areas on slopes, in ditches or on waterways to prevent erosion. Dimensional treated roofing shall be applied within 24 hours after an area has been planted. Application rates and materials must meet Georgia Department of Transportation specifications.

Wood cellulose and wood pulp fibers shall not contain germination or growth inhibiting factors. They shall be evenly dispersed when applied in water. The fibers shall contain a dye to allow visual monitoring and aid in uniform application during seeding.

**Applying Mulch:** Mulch shall be spread uniformly within 24 hours after seeding and before the seed is sown. Mulch shall be spread by hydraulic seeding on slopes 6:1 or steeper. Broadcast application shall be used on level areas. Broadcast application shall be used on level areas. Broadcast application shall be used on level areas.

**Anchor Straw or Hay:** Anchor straw or hay immediately after application by one of the following methods:  
1. Emulsified asphalt can be sprayed uniformly onto the mulch as it is spread.  
2. Insecticide can be sprayed on the mulch immediately following mulch application when straw or hay is spread by methods other than special hydraulic equipment.  
3. The combination of asphalt emulsion and water shall consist of a homogeneous mixture satisfactory for spraying. The mixture shall consist of 100 gallons of grade SS-10 or SS-15 emulsified asphalt and 100 gallons of water per ton of mulch.  
4. Adjacent property, pavements, curbs, sidewalks, and all other structures from asphalt emulsion.  
5. Hay and straw mulch shall be pressed into the soil immediately after the mulch is applied.  
6. Hay and straw mulch shall be placed in the same depth or slightly deeper than they grew at the nursery. The top of vines and springs must be at or slightly above the ground surface.  
7. Where individual holes are dug, fertilizer shall be placed in the bottom of the hole, two inches of soil shall be added and the plant shall be set in the hole.

**NOTE:** FERTILE PERMANENT GRASS SPECIES IS COMMON BERMUDEA.

#### Line Maintenance Application

Apply seed to an application line every 4 to 6 years or as indicated by soil tests. Soil tests can be conducted to determine more accurate requirements if desired.

**Use and Management:** Mow Sericea Lespedeza only after frost to ensure that the seeds are mature. Mow between November and March. Bermudagrass, Bahiagrass and Tall Fescue may be mowed as desired. Moderate use of top growth is beneficial after establishment. Exclude traffic until plants are well established. Because of the quality nesting season, mowing should not take place between May and September.

**Bedding Material:** Mulch is used as a bedding material to conserve moisture and control weeds in nurseries, ornamental beds, around shrubs, and on bare areas on lawns.

**Material:** Grain straw 4" to 6"  
Grass hay 4" to 6"  
Pine needles 3" to 5"  
Wood waste 4" to 6"

**Irrigation:** Irrigation will be applied at a rate that will not cause runoff.

**Topdressing:** Topdressing will be applied on all temporary and permanent (perennial) species planted alone or in mixtures with other species. Recommended rates of application are listed in Table 6-5.1.

**Second Year Fertilizer and Maintenance:** Fertilizer rates are listed in Table 6-5.1.

#### D54 Sediment Barrier

##### DEFINITION

Sediment barriers are temporary structures typically constructed of silt fence supported by steel or wood posts. Other types of barriers may include sandbags, straw bales, brush piles or other filtering material.

##### PURPOSE

To prevent sediment carried by sheet flow from leaving the site and entering natural drainage ways or storm drainage system by slowing storm water runoff and causing the deposition of sediment of the structure.

##### CONDITIONS

Barriers should be installed where runoff can be stored behind the barrier with out damming the flow or the subgrained area behind the fence. Silt fence shall not be installed across streams, ditches, waterways, or other concentrated flow areas.

##### DESIGN CRITERIA

##### HAY OR STRAW BALES

Hay or straw bales retain sediment load transported by sheet flow from disturbed areas. The bales, comparatively low flow rate should be considered when placed on disturbed areas. The slope lengths contributing runoff to a bale barrier cannot exceed those listed in Table 6-20.1. Straw and hay bales shall not be used if the project duration is expected to exceed three months.

##### CRITERIA FOR STRAW OR HAY BALE PLACEMENT

Land Slope Percent	Maximum Slope Length Above Bale, Feet
<2	100
2 to 5	75
5 to 10	50
10 to 20	25
>20*	10

Table 6-20.1

##### SILT FENCE

Like hay or straw bales, silt fence is designed to retain sediment transported by sheet flow from disturbed areas. Silt fence performs the same function as hay or straw bales, allows a higher flow rate, and is usually faster and cheaper to install. Approved silt fence fabrics are listed in the Georgia Department of Transportation Qualified Products List (GDOT-QPL-36). See Table 6-20.5 for current Georgia DOT silt fence specifications. When all runoff is to be stored behind the fence (where no stormwater disposal system is present), maximum slope length behind a silt fence shall not exceed those shown in Table 6-20.2. The drainage area shall not exceed 1/3 acre for every 100 feet of silt fence.

##### CRITERIA FOR SILT FENCE PLACEMENT

Land Slope Percent	Maximum Slope Length Above Fence, Feet
<2	100
2 to 5	75
5 to 10	50
10 to 20	25
>20*	15

Table 6-20.2

#### Type A Silt Fence - Sd1a

Type A Silt Fence is 34-Gauge 3x6s with wire reinforcement. The wire reinforcement is necessary because this fabric allows about three times the flow rate of Type A Silt Fence. Type C Silt Fence shall be used where runoff flows or velocities are particularly high or where slopes exceed a vertical height of 10 feet.

#### Type C Silt Fence - Sd1c

Type C Silt Fence is 34-Gauge 3x6s with wire reinforcement. The wire reinforcement is necessary because this fabric allows about three times the flow rate of Type C Silt Fence. Type C Silt Fence shall be used where runoff flows or velocities are particularly high or where slopes exceed a vertical height of 10 feet.

Provide a riprap splash pad or other outlet protection device for any point where flow may imp the sediment fence. Ensure that the maximum height of the fence at a protected, reinforced outlet does not exceed 18" and that support post spacing does not exceed 4 ft.

##### CONSTRUCTION SPECIFICATIONS

##### Silt Fence

The manufacturer shall have an approved color mark on the fabric or label the fabricated silt fence with both the manufacturer and fabric name every 100 feet. The temporary silt fence shall be installed according to this specification, as shown on the plan or as directed by the engineer. For installation of the fabric, see Figures 6-20.4, 6-20.5 and 6-20.6 respectively.

Post installation shall start at the center of the lowpoint (if applicable) with remaining posts spaced 4 feet apart for Type A and B silt fences and be used with both wood and steel posts, only steel posts shall be used with Type C silt fence. For more requirements, see Table 6-20.3. Fasteners for wood posts are listed in Table 6-20.4.

Along stream banks and other sensitive areas, use one of Type A Silt Fence or one of Type C Silt Fence backed by hydrules shall be used.

##### MAINTENANCE

Sediment shall be removed once it has accumulated to one-half the original height of the barrier. Filter fabric shall be replaced whenever it has deteriorated to such an extent that the effectiveness of the fabric is reduced (approximately six months). Temporary sediment barriers shall remain in place until disturbed areas have been permanently established. All sediment accumulated at the barrier is removed.

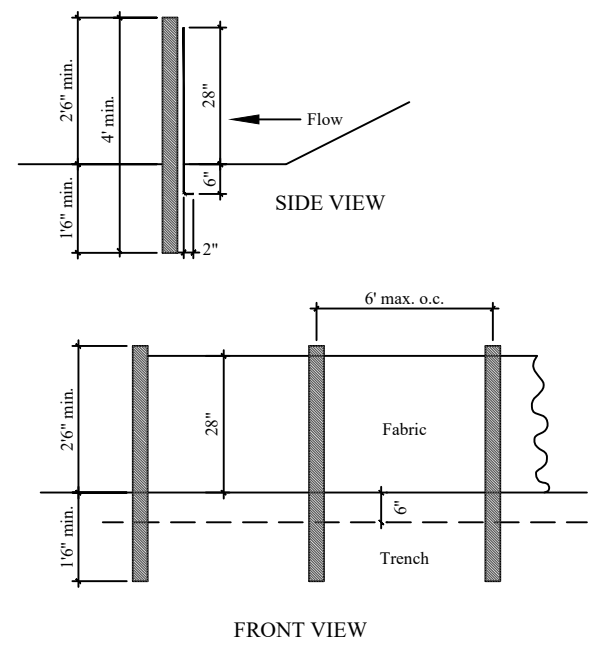


Figure 6-20.4

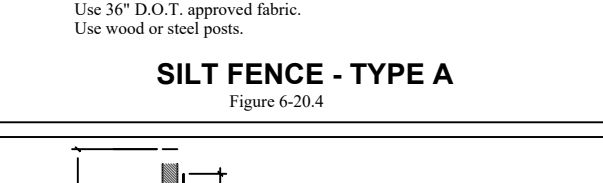


Figure 6-20.5

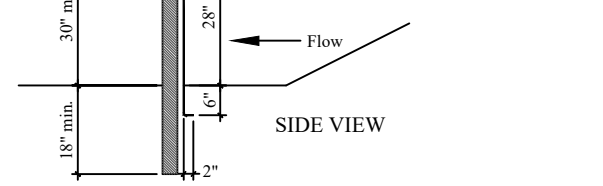


Figure 6-20.6

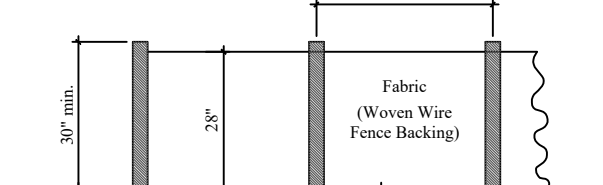


Figure 6-20.7

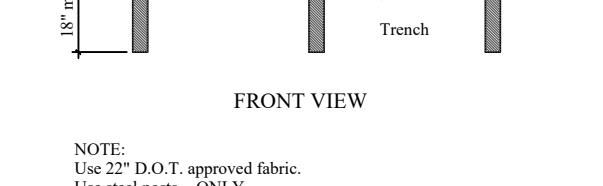


Figure 6-20.8

Type	Minimum Length	Type of Post	Size of Post
Type A	4'	Soft Wood	3" dia. x 2'4"
		Steel	1.5" x 1.5" x 1.3 lb./ft. min.
Type C	4'	Steel	1.3 lb./ft. min.

##### FASTENERS FOR WOOD POSTS

Table 6-20.4

Wire Staples	Gauge	Crown	Legs	Staples/Posts
	17 min.	3/4" wide	1 1/2" long	5 min.

##### FASTENERS FOR SILT FENCES

Figure 6-20.7

Type Fence	A	C
Tensile Strength (kN, Max.) (1) (ASTM D-4632)	Warp -120	Warp -260
Elongation (% Max.) (ASTM D-4632)	Fill -100	Fill -150

##### TYPE FENCE

Table 6-20.5

AOS (Aperture Opening Size) (Max. Sieve Size) (ASTM D-4751)	#30	#30
Flow Rate (Gal/Min/Sq Ft.) (GDT-87)	25	70
Ultraviolet Stability (2) (ASTM D-4622 after 300 hours weathering in accordance with ASTM D-4355)	80	80
Burning Strength (PSI Min) (ASTM D-3786 Diaphragm Burning Strength Tester)	175	175
Minimum Fabric Width (Inches) (ASTM D-4622)	36	36

(1) Minimum wall coverage of five specimens.  
(2) Percent of required initial minimum tensile strength.

Table 6-20.5

## STRUCTURAL PRACTICES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Co	CONSTRUCTION EXIT	[Diagram]	[Symbol]	A crushed stone pad located at the construction site exit to provide a place for removing mud from tires thereby protecting public streets.
Rd	ROCK FILTER DAM	[Diagram]	[Symbol]	A permanent or temporary stone filter dam installed across small streams or drainageways.
Sd1	SEDIMENT BARRIER	[Diagram]	[Symbol]	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	[Diagram]	[Symbol]	An impounding area created by excavating around a storm drain drop inlet. The excavated area will be filled and stabilized on completion of construction activities.
St	STORM DRAIN OUTLET PROTECTION	[Diagram]	[Symbol]	A paved or short section of riprap 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 MULCHING ONLY)	[Diagram]	[Symbol]	Establishing temporary protection for disturbed areas where seedlings may not have a suitable growing season to produce an erosion retarding cover.
Ds2	DISTURBED AREA STABILIZATION (WITH TEMP. SEEDING)	[Diagram]	[Symbol]	Establishing a temporary vegetative cover with fast growing seedlings on disturbed areas.
Ds3	DISTURBED AREA STABILIZATION (WITH PERM. SEEDING)	[Diagram]	[Symbol]	Establishing a permanent vegetative cover such as trees, shrubs, vines, grasses, or legumes on disturbed areas.
Du	DUST CONTROL ON DISTURBED AREAS	[Diagram]	[Symbol]	Controlling surface and air movement of dust on construction site, roadways and similar sites.

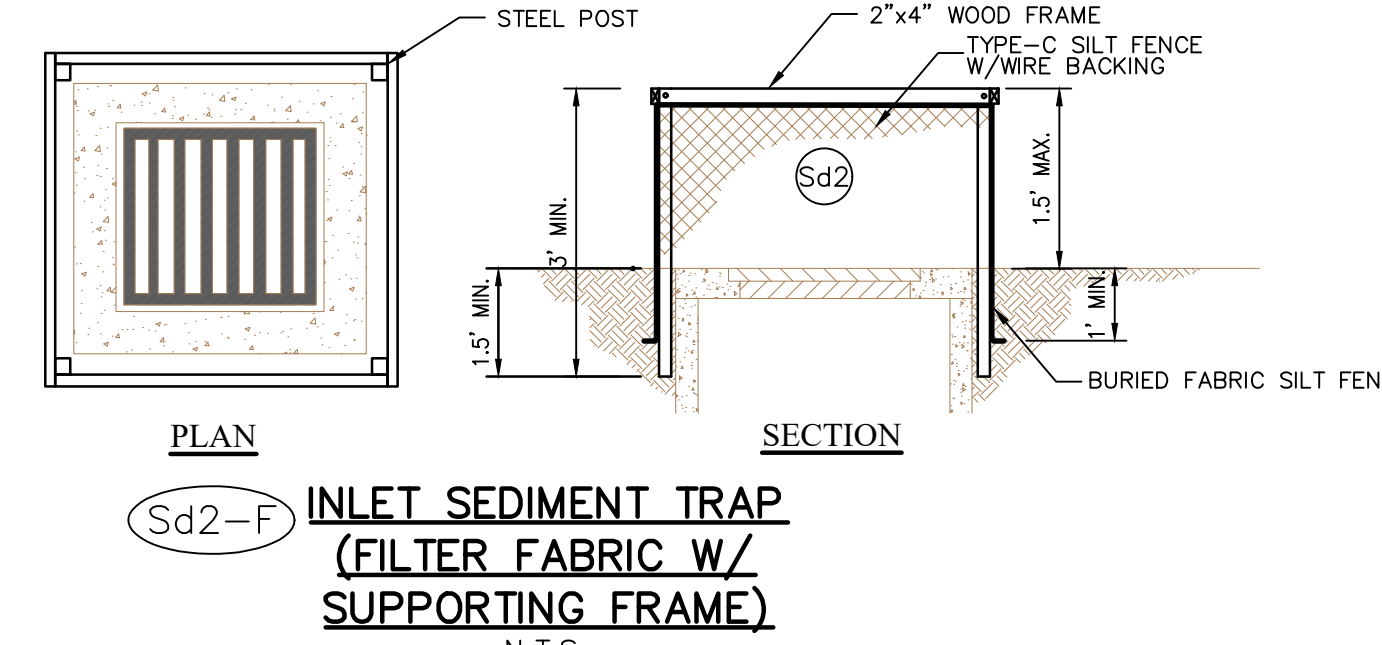


Figure 6-20.7