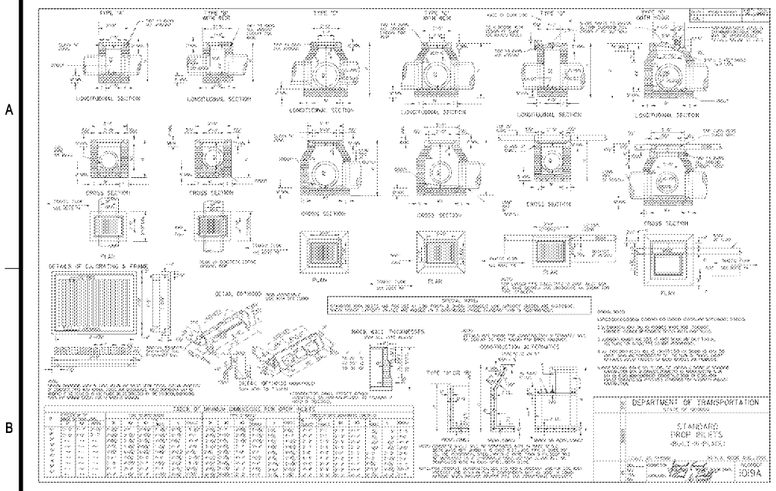
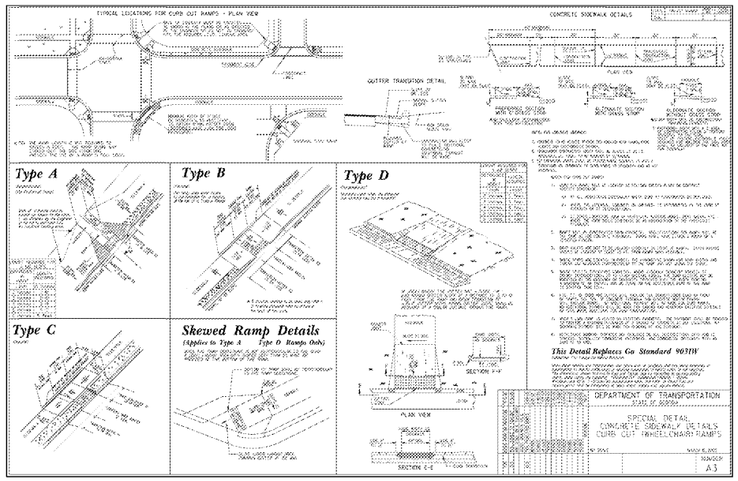
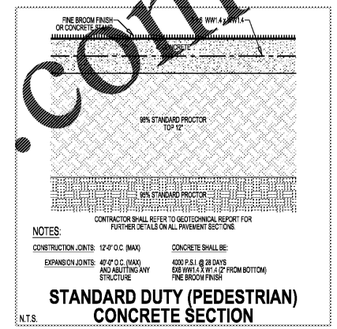






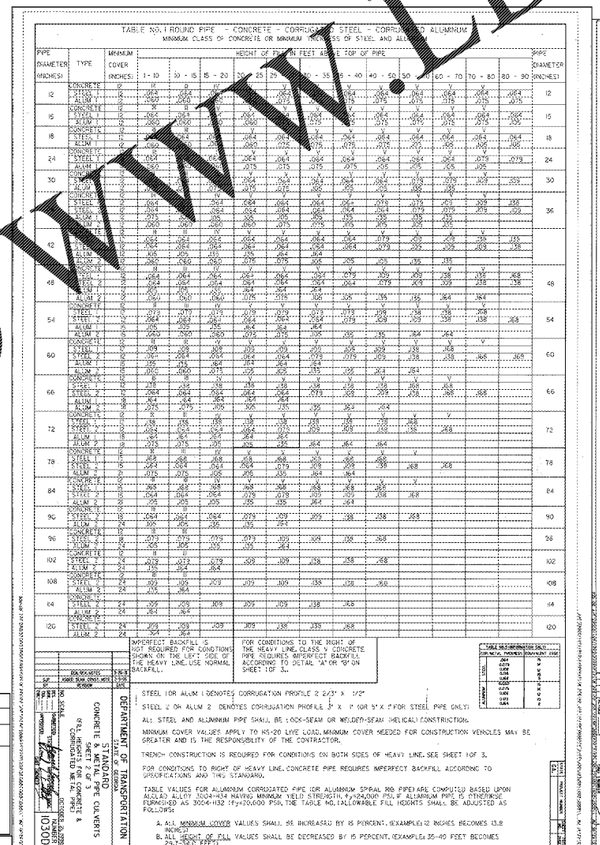
STANDARD DUTY (PEDESTRIAN) CONCRETE SECTION

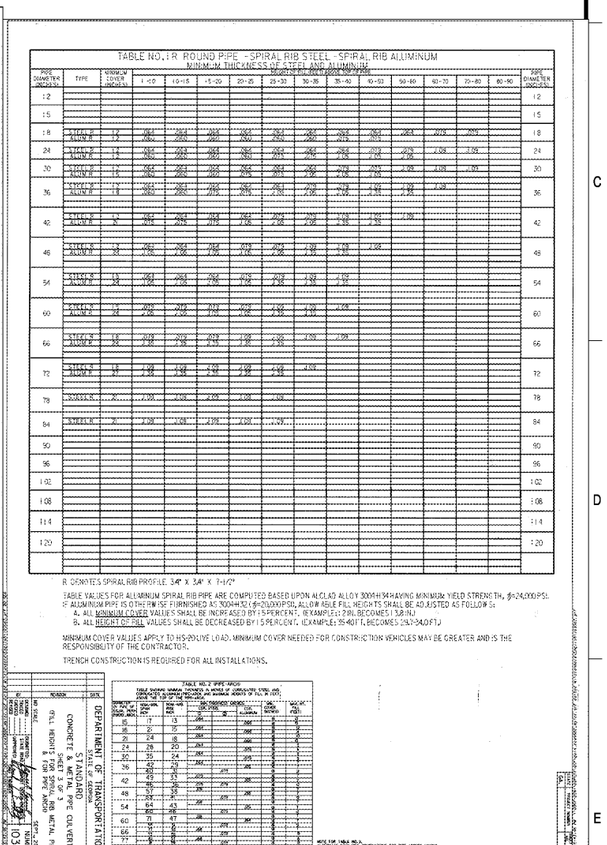
ASTM D2321 [1] (CSA B182.11) CLASS DESCRIPTION		ASTM D2487 NOTATION	ASTM D2487 DESCRIPTION	AASHTO M43 NOTATION	AASHTO M145 NOTATION	BNQ 2560	ASTM D2321 [1] (CSA B182.11) PERCENTAGE PASSING SIEVE SIZES 1 1/2 IN. (40mm)	3/8" (9.5mm)	No. 4 (4.75mm)	NO. 200 (0.075mm)	ATTERBERG LIMITS LL	PI	COEFFICIENTS Cu	Cc
I [2]	CRUSHED ROCK, ANGULAR [3]	N/A	ANGULAR CRUSHED STONE OR ROCK, CRUSHED GRAVEL, CRUSHED SLAG; LARGE VOIDS WITH LITTLE OR NO FINES	5, 56, 57 [4] 6, 67 [4]	N/A		100%	<25%	<15%	<12%	NON PLASTIC		N/A	
II	CLEAN, COARSE-GRAINED SOILS	GW	WELL-GRADED GRAVEL, GRAVEL-SAND MIXTURES; LITTLE OR NO FINES	5, 6	A1, A3	CG-14, MG-20	100%		<50% of "COARSE FRACTION"	<5%	NON PLASTIC		>4	1 to 3
		GP	POORLY-GRADED GRAVELS, GRAVEL-SAND MIXTURES; LITTLE OR NO FINES	56, 57, 67									4	<1 or >3
		SW	WELL-GRADED SANDS, GRAVELLY SANDS; LITTLE OR NO FINES						>50% of "COARSE FRACTION"				>6	1 to 3
		SP [6]	POORLY-GRADED SANDS, GRAVELLY SAND; LITTLE OR NO FINES										<6	<1 or >3
	COARSE-GRAINED SOILS, BODERLINE CLEAN TO W/FINES	GW-GC, SP-SM	SANDS AND GRAVELS WHICH ARE BORDERLINE BETWEEN CLEAN AND WITH FINES	N/A			100%		VARIES	5% TO 12%	NON PLASTIC		SAME AS FOR GW, GP, SW AND SP	
III	COURSE-GRAINED SOILS WITH FINES	GM	SILTY GRAVELS, GRAVEL-SAND-SILT MIXTURES	GRAVEL & SAND WITH <10% FINES	A-2-4, A-2-5, A-2-6, OR A-4 OR A-6 SOILS WITH MORE THAN 30% RETAINED ON #200 SIEVE		100%		<50% of "COARSE FRACTION"	12% TO 50%	N/A	<4 OR <"A" LINE		
		GC	CLAYEY GRAVELS, GRAVEL-SAND-CLAY MIXTURES									<7 & >"A" LINE		
		SM	SILTY SANDS, SAND-CLAY MIXTURES						>50% of "COARSE FRACTION"			>4 OR <"A" LINE		
		SC	CLAYEY SANDS, SAND-CLAY MIXTURES									>7 & >"A" LINE		
	INORGANIC FINE-GRAINED SOILS	ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS, SILTS WITH SLIGHT PLASTICITY							< 30% (RETAINED)		<4 OR <"A" LINE		
		CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY; GRAVELLY, SANDY, OR SILTY CLAYS; LEAN CLAYS						100%	< 30% (RETAINED)	<50	>7 & >"A" LINE		
IV [5]	INORGANICS FINE-GRAINED SOILS	ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS, SILTS WITH SLIGHT PLASTICITY	N/A	A-2-7 OR A-4 OR A-6 SOILS WITH 30% OR LESS RETAINED ON #200 SIEVE		100%			< 30% (Retained)	<50	<4 or <"A" LINE		N/A
		CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY; GRAVELLY, SANDY, OR SILTY CLAYS; LEAN CLAYS	N/A								>7 & >"A" LINE		
V [7]	INORGANIC FINE-GRAINED SOILS	MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SANDY OR SILTY SOILS, ELASTIC SILTS	N/A	A5, A7		100%		100%	>50%	>50	<"A" LINE		N/A
		CH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS	N/A								>"A" LINE		
	ORGANIC SOILS OR HIGHLY ORGANIC SOILS	OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY	N/A			100%		100%	>50%	<50	<4 OR <"A" LINE		N/A
		OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS	N/A							>50	<"A" LINE		
		PT	PEAT AND OTHER HIGH ORGANIC SOILS	N/A										

NOTES:
1. REFER TO ASTM D2321 / CSA B182.11 / BNQ 2560 FOR MORE COMPLETE SOIL DESCRIPTIONS.
2. CLASS I MATERIALS ALLOW FOR A BROADER RANGE OF FINES THAN PREVIOUS VERSIONS OF D2321 / B182.11. WHEN SPECIFYING CLASS I MATERIAL FOR INFILTRATION SYSTEMS, THE ENGINEERING SHALL INCLUDE A REQUIREMENT FOR AN ACCEPTABLE LEVEL OF FINES.
3. ALL PARTICLE FACES SHALL BE FRACTURED.
4. ASSUMES LESS THAN 25% PASSES THE 3/8" SIEVE.
5. CLASS IV MATERIALS REQUIRE A GEOTECHNICAL EVALUATION PRIOR TO USE AND SHOULD ONLY BE USED AS BACKFILL UNDER THE GUIDANCE OF A QUALIFIED ENGINEER.
6. UNIFORM FINE SANDS (SP) WITH MORE THAN 50% PASSING A 100 SIEVE BEHAVE LIKE SILTS AND SHOULD BE TREATED AS CLASS III SOILS IF ALLOWED.
7. CLASS V MATERIALS SHALL NOT BE PERMITTED AS BEDDING AND BACKFILL MATERIAL.

PIPE GAUGE CHART		
SPIRAL RIB (ALUMINIZED TYPE 2) PIPE		
18 GAUGE PIPE DIAMETER	14 GAUGE PIPE DIAMETER	12 GAUGE PIPE DIAMETER
12" 15" 18" 21" 24" 27" 30"	33" 36" 39" 42" 48"	54" AND LARGER

ASTM D2321 CLASS DESCRIPTION		
I	II	III
CRUSHED ROCK ANGULAR	CLEAN COARSE-GRAINED SOILS COARSE-GRAINED SOILS, BORDERLINE CLEAN TO W/FINES	COARSE-GRAINED SOILS W/FINES INORGANIC FINE GRAINED SOILS





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

TABLE VALUES FOR ALUMINUM SPIRAL RIB PIPE ARE COMPUTED BASED UPON ALCLAD ALLOY 3004-H34 HAVING MINIMUM YIELD STRENGTH, f_y=24,000 PSI. IF ALUMINUM PIPE IS OTHERWISE FURNISHED AS 3004-H32 (f_y=20,000 PSI) OR TABLE NO. 1 ALLOWABLE FILL HEIGHTS SHALL BE ADJUSTED AS FOLLOWS:
A. ALL MINIMUM COVER VALUES SHALL BE INCREASED BY 15 PERCENT. (EXAMPLE: 12 IN. BECOMES 13.8 IN.)
B. ALL HEIGHT OF FILL VALUES SHALL BE DECREASED BY 15 PERCENT. (EXAMPLE: 35-40 FT. BECOMES 29.7-34.0 FT.)

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

TRENCH CONSTRUCTION IS REQUIRED FOR ALL INSTALLATIONS.

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GEORGIA REGISTERED NO. PE031662 PROFESSIONAL ENGINEER JASON P. BROWN

Project Information

EMMANUEL SEVENTH DAY ADVENTIST CHURCH
16 188 02 001
1780 ROCK CHAPEL ROAD, LITHONIA, GA 30058
DEKALB, COUNTY
ZONING (COUNTY) - R-85 (RESIDENTIAL MEDIUM LOT)

DRAWING DATE:	8.22.19
DRAWN BY:	MKS
CHECKED BY:	JPB

REVISIONS

DATE:	DESCRIPTION:
01.31.20	ADDRESS COMMENTS

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Sheet Title

SITE WORK DETAILS

Sheet Number

GDOT 1.6