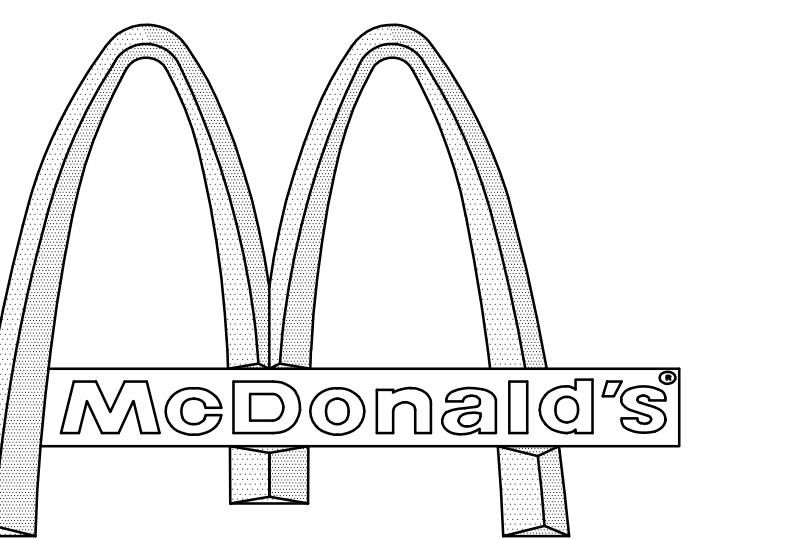


SITE DEVELOPMENT PLANS

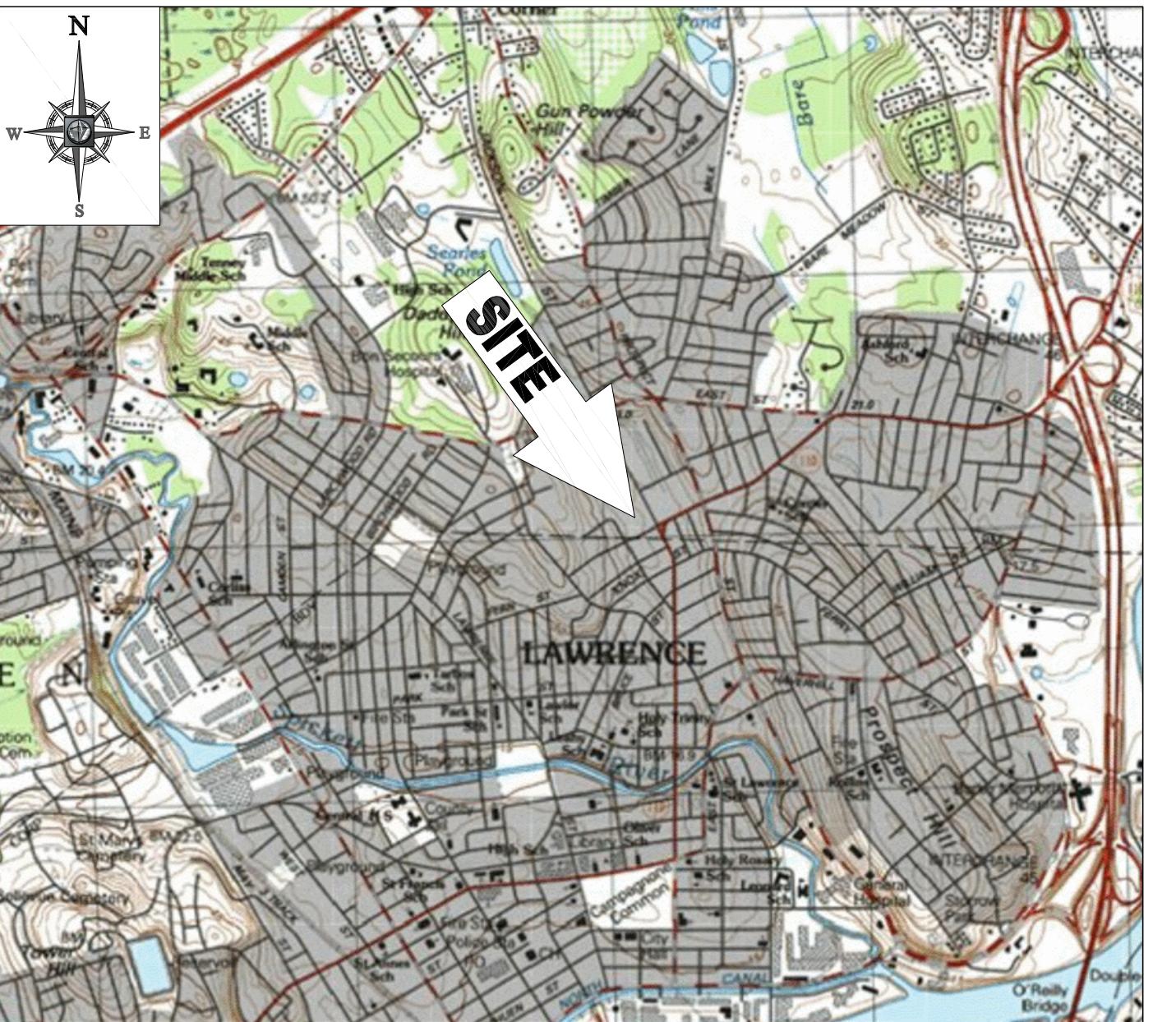
FOR:
PROPOSED



WITH DRIVE-THRU

LOCATION OF SITE:

SWAN STREET & CORNISH STREET EXTENSION
TOWN OF METHUEN,
ESSEX COUNTY, MASSACHUSETTS
PARCELS 816-96-11, 816-96-11B & 816-96-11C



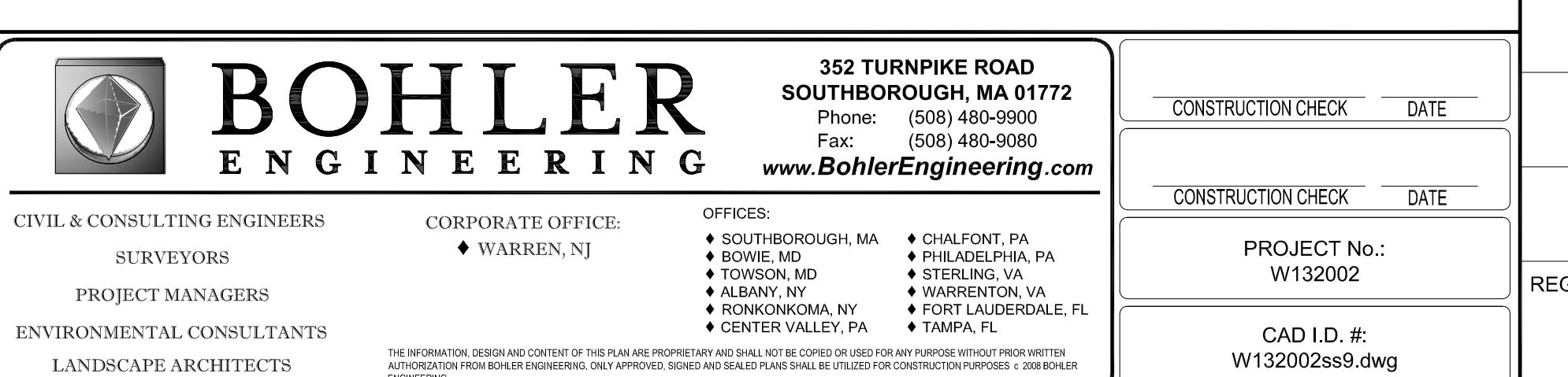
LOCATION MAP

SCALE: 1"=2000'



Know what's below.

PREPARED BY
BOHLER
ENGINEERING



<i>SHEET TITLE</i>	<i>SHEET NUMBER</i>
OVER SHEET	C-1 OF 16
GENERAL NOTES SHEET	C-2 OF 16
DEMOLITION PLAN	C-3 OF 16
OVERALL SITE PLAN	C-4 OF 16
SITE PLAN	C-5 OF 16
GRADING & DRAINAGE PLAN	C-6 OF 16
UTILITY PLAN	C-7 OF 16
DIL EROSION & SEDIMENT CONTROL PLAN	C-8 OF 16
DIL EROSION CONTROL NOTES & DETAILS SHEET	C-9 OF 16
LANDSCAPE PLAN	C-10 OF 16
LANDSCAPE NOTES & DETAILS SHEET	C-11 OF 16
LIGHTING PLAN	C-12 OF 16
TAIL SHEET	C-13 OF 16
TAIL SHEET	C-14 OF 16
TAIL SHEET	C-15 OF 16
TAIL SHEET	C-16 OF 16
DATA SURVEY (BY OTHERS)	1 OF 2
DATA SURVEY (BY OTHERS)	2 OF 2
BUILDING ELEVATIONS (BY OTHERS - SEPARATELY BOUND)	

RAWING INDEX

GENERAL NOTES:

1. BASES, ANCHOR BOLTS, CONDUIT, AND WIRING FOR ALL OTHER SIGNS ARE BY THE GENERAL CONTRACTOR.
2. 3/4" EMPTY CONDUIT TO LOCATIONS SHOWN AT THE LOT PERIMETER FOR LOT LIGHTING IS BY THE GENERAL CONTRACTOR. LIGHTING FIXTURES, BASES, POLES, CONDUIT, AND WIRING ARE BY THE OWNER/OPERATOR.
3. BASES FOR FLAGPOLES ARE BY THE GENERAL CONTRACTOR. ANCHOR BOLTS ARE BY THE FLAGPOLE SUPPLIER.
4. PROPOSED UTILITIES ARE SHOWN IN SCHEMATIC ONLY. EXACT LOCATIONS SHALL BE DETERMINED TO ALLOW FOR THE MOST ECONOMICAL INSTALLATION.
5. THE CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO DETERMINE EXACT POINT OF SERVICE CONNECTION AT EXISTING UTILITY. REFER TO THE BUILDING ELECTRICAL AND PLUMBING DRAWINGS FOR UTILITY SERVICE ENTRANCE LOCATIONS, SIZES, AND CIRCUITING.
6. ALL ELEVATIONS SHOWN ARE BASED UPON, NAVD 88 PER SURVEY NOTE #7.
7. ALL LANDSCAPE AREAS SHALL BE ROUGH GRADED TO 6" BELOW TOP OF ALL WALKS AND CURBS. FINISH GRADING, LANDSCAPING, AND SPRINKLER SYSTEMS ARE BY THE OWNER/OPERATOR.
8. LOT LIGHTING CONCRETE FOOTINGS TO CONFORM WITH THE SOILS REPORT RECOMMENDATIONS FOR THIS PARTICULAR SITE. FOUNDATION DESIGN AND CONSTRUCTION IS BY THE GENERAL CONTRACTOR.

PAVING SPECIFICATION

(SEE PAVEMENT DETAIL)

FLEXIBLE PAVEMENT SECTION:

- 1.5" M.04.02- CLASS 2 TOP COURSE
- 1.5" M.04.02- CLASS 1 BASE COURSE
- 12.0" M.02.06 TYPE C PROCESSED GRAVEL SUBBASE

RIGID PAVEMENT SECTION:

- 6.0" 4500 PSI AIR-ENTRAINED CONCRETE
- 8.0" 4500 PSI AIR-ENTRAINED CONCRETE AT TRASH ENCLOSURE
- 12.0" M.02.06 TYPE C PROCESSED GRAVEL SUBBASE

NOTE: FINAL PAVEMENT SPECIFICATIONS TO BE COORDINATED WITH GEOTECHNICAL REPORT RECOMMENDATIONS. McDONALD'S ENGINEER RESERVES THE RIGHT TO REQUEST A COMPACTION TEST AND/OR A CORE SAMPLE. IF TESTS PROVE CORRECT, PER ABOVE SPECIFICATION, TESTS WILL BE AT THE EXPENSE OF McDONALD'S, OTHERWISE, G.C. WILL BE CHARGED.

LOT LIGHTING SUPPLIED BY

SECURITY LIGHTING SYSTEMS
1085 JOHNSON DRIVE
BUFFALO GROVE, IL 60089
(800) 544 4848

NOTE: ELECTRICAL CONTRACTOR TO CIRCUIT LOT LIGHTING AS NOTED.

PARKING INFORMATION

TOTAL SPACES
324

324 TOTAL SPACES (REFER TO OVERALL SITE PLAN)

UTILITY INFORMATION

	SIZE	TYPE	LOCATION
SANITARY SEWER	16"	TBD	JACKSON STREET
WATER	TBD	DI	JACKSON STREET
STORM SEWER	12"	RCP	ON-SITE
ELECTRIC	TBD	OH WIRE	ON-SITE
GAS	TBD	TBD	SWAN STREET

SURVEY INFORMATION

PREPARED BY: CONTROL POINT ASSOCIATES, INC.
352 TURNPIKE ROAD
SOUTHBOROUGH, MA 01772
JOB #: CM13231
DATE: OCTOBER, 23 2013
REVISED: DECEMBER 2, 2013

EXISTING CONDITIONS LEGEND

— 124 —	EXISTING CONTOUR
— 125 —	
× 123.45	EXISTING SPOT ELEVATION
	HYDRANT
	WATER VALVE
— OH —	OVERHEAD WIRES
— E —	APPROX. LOC. UNDERGROUND ELEC. LINE
— T —	APPROX. LOC. UNDERGROUND TELE. LINE
— W —	APPROX. LOC. UNDERGROUND WATER LINE
●	UTILITY POLE
	UTILITY POLE/LIGHT POLE
	GUY WIRE
—	SIGN
●	BOLLARD
	AREA LIGHT
	PAY PHONE
	PAINTED ARROWS
	PARKING SPACE COUNT
	RAILROAD TIE WALL

STREET ADDRESS
SWAN STREET@ CORNISH STREET EXT.

CITY STATE
METHUEN MASSACHUSETTS

COUNTY
ESSEX

REGIONAL DWG. NO

PLAN DESCRIPTION

COVER SHEET

REV	DATE	DESCRIPTION	BY
1	1/22/14	REVISE SIGN TABLE	EGD
2	1/31/14	REVISIONS PER CITY STAFF	AWP
3	2/19/14	REVISIONS PER CITY STAFF	EGD
4	5/19/14	REPETITIVE PETITION SUBMISSION	EGD
5	7/15/14	ADDITIONAL DETAILING	EGD
6	9/2/14	REVISED PER COMMENT LETTER	BPB
7	10/27/14	REVISED PER STAFF COMMENT	EGD
8	1/16/15	REVISED PER STAFF COMMENT	EGD
9	1/21/15	ISSUED FOR COMMUNITY DEVELOPMENT BOARD ENDORSEMENT	EGD

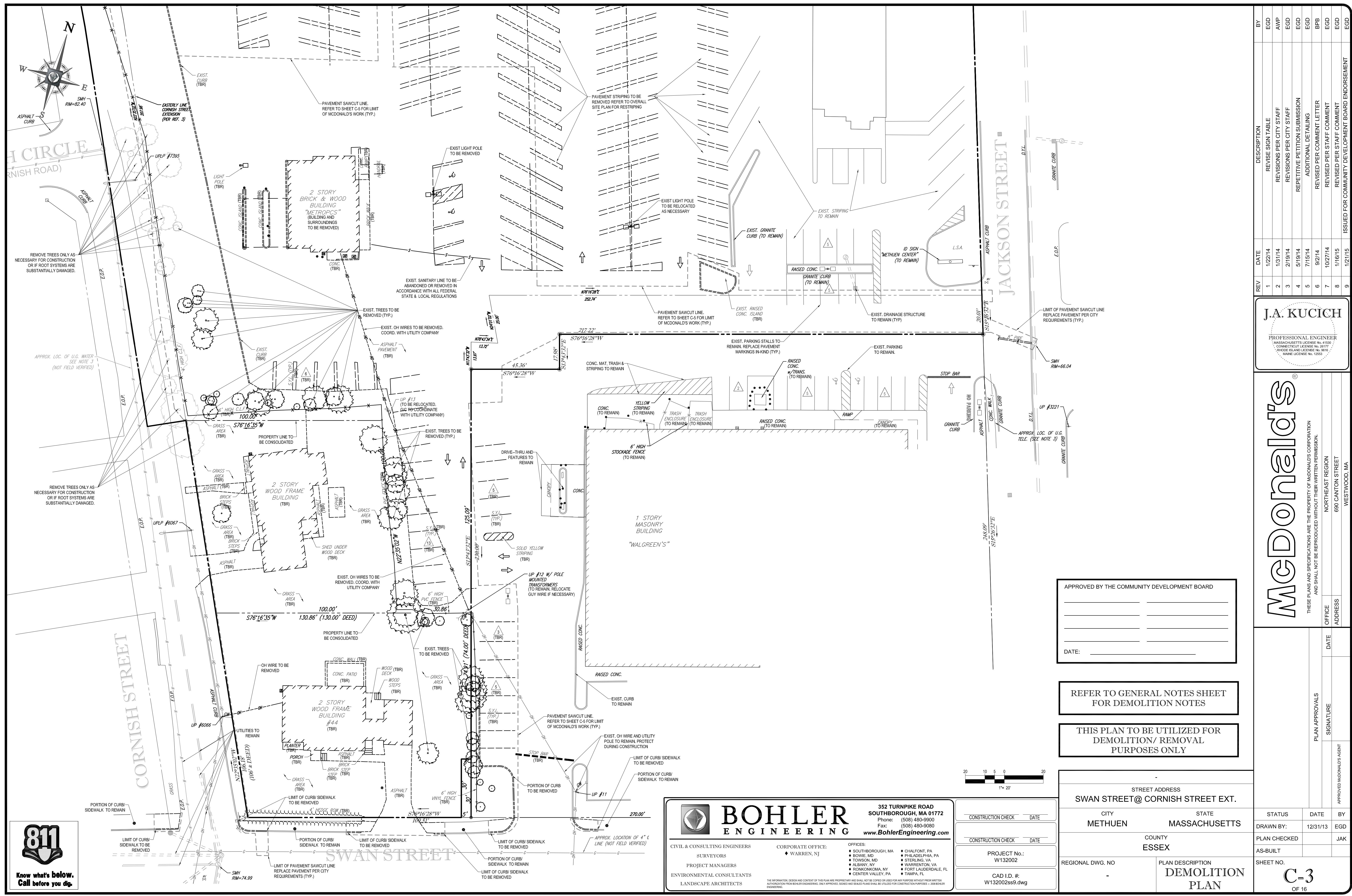
MCDonald's®

THESE PLANS AND SPECIFICATIONS ARE THE PROPERTY OF McDONALD'S CORPORATION
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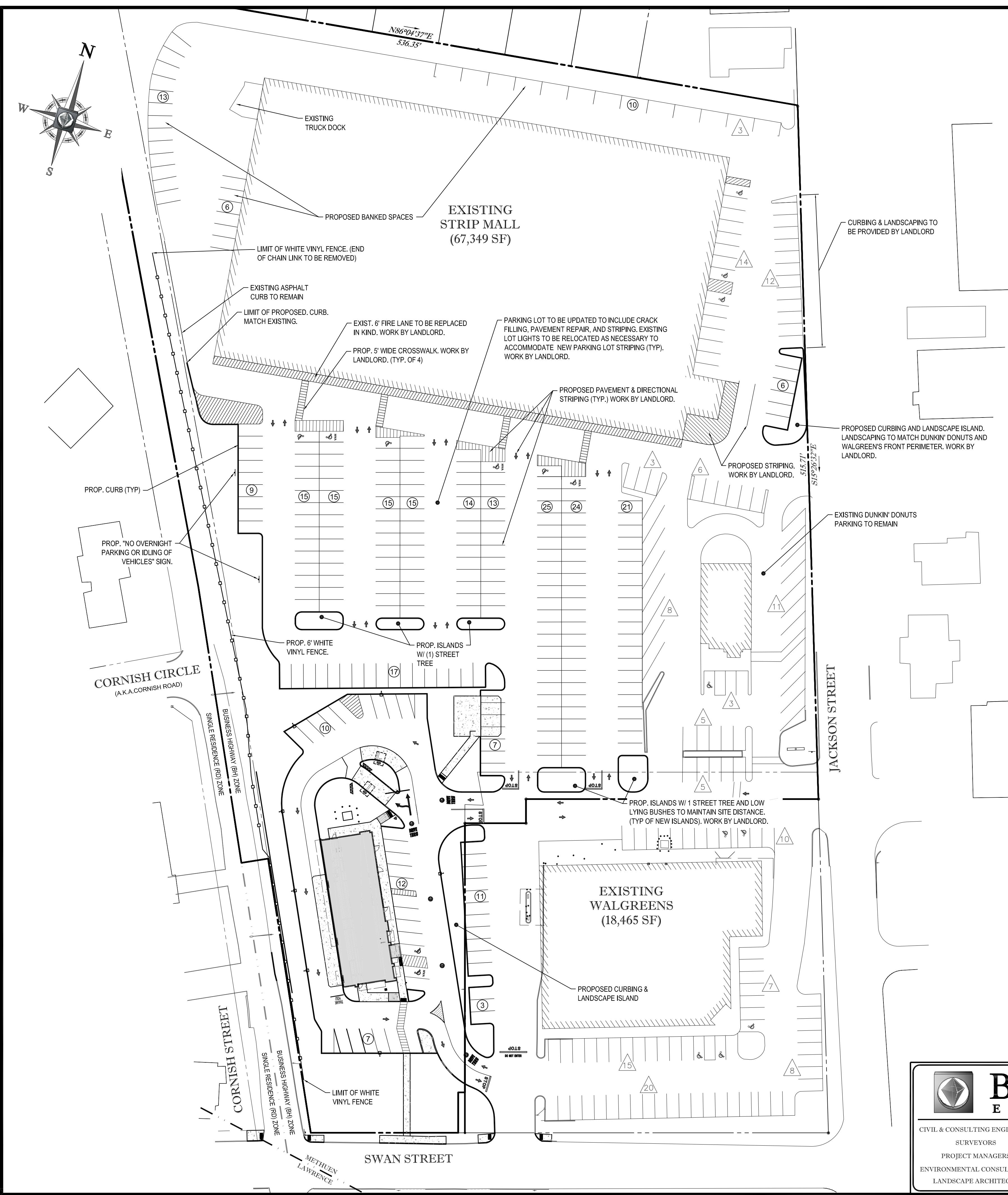
APPROVED McDONALD'S AGENT	ADDRESS	ADDRESS
	690 CANTON STREET WESTWOOD, MA	

STATUS	DATE	BY
DRAWN BY:	12/31/13	EGD
PLAN CHECKED		JAK
AS-BUILT		
SHEET NO.		

C-1



**Know what's below
Call before you dig**



LAND USE / ZONING INFORMATION & NOTES

1. OWNER:

METHUEN VENTURE LIMITED PARTNERSHIP
C/O ALLEN ASSOCIATES PROPERTIES, INC.
NEWTON CENTRE STREET, SUITE 403
NEWTON CENTRE, MA 02459-0003
2. APPLICANT:

McDONALD'S USA, LLC
C/O BOHLER ENGINEERING
352 TURNPIKE ROAD
SOUTHBOROUGH, MA 01772
3. PARCEL:

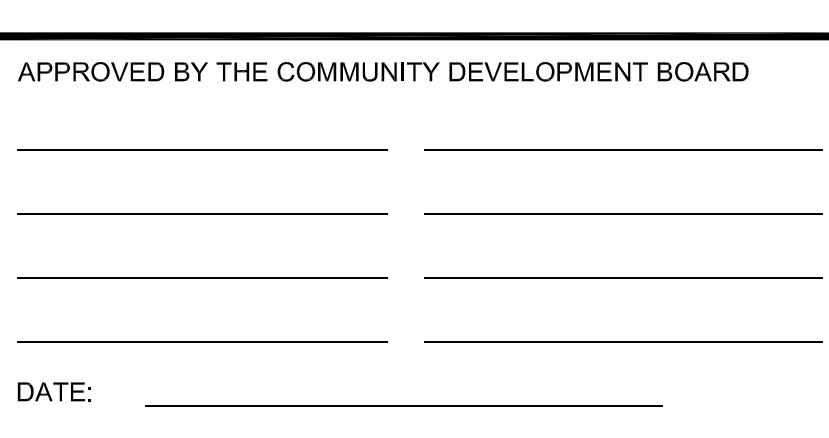
MAP: J14, PARCELS: 816-96-11, 816-96-11B, 816-96-11C
SWAN STREET & CORNISH STREET EXTENSION
CITY OF METHUEN
ESSEX COUNTY, MA

I CERTIFY THAT THIS PLAN HAS BEEN PREPARED
IN CONFORMANCE WITH THE RULES AND
REGULATIONS OF THE REGISTERS OF DEEDS:

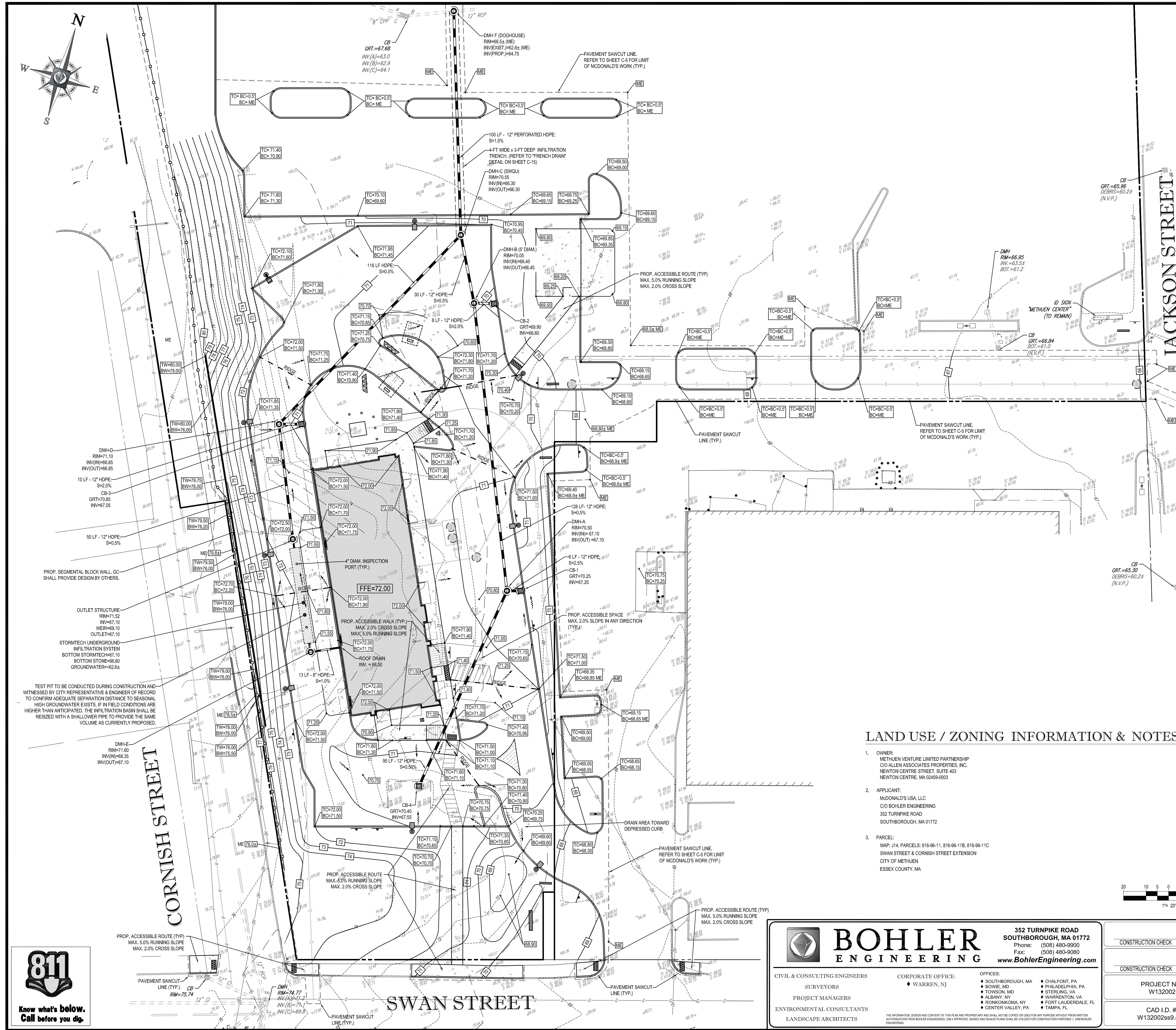
ZONING ANALYSIS TABLE			
ZONING DISTRICT	BUSINESS HIGHWAY (RESTAURANT USE REQUIRES SPECIAL PERMIT FROM ZBA) (SPECIAL PERMIT FROM ZBA FOR DRIVE-THRU OPERATIONS AFTER 12AM) (RESTAURANT W/ DRIVE-THRU USE REQUIRES SPECIAL PERMIT FROM CDB)		
ZONE CRITERIA	REQUIRED	EXISTING	PROPOSED
MINIMUM LOT AREA	10,000 SF	301,513 SF	NO CHANGE
MINIMUM LOT WIDTH	100-FT	±109.5-FT	NO CHANGE
MAX. BUILDING COVERAGE	35%	±26.5%	±24.6%
MIN. SIDE SETBACK (McDONALD'S)	30-FT	±28.9-FT	±50.4-FT
MIN. FRONT SETBACK (McDONALD'S)	25-FT 25-FT	±34.2-FT (SWAN STREET) ±14.2-FT (CORNISH STREET)	±108.1-FT (SWAN STREET) ±40.5-FT (CORNISH STREET)
MIN. REAR SETBACK (McDONALD'S)	30-FT	N/A	N/A
MAX. BUILDING HEIGHT (McDONALD'S)	40-FT / 3 STORIES	±18-FT	<25-FT / 1 STORY
PARKING SPACES	324	284	324 (1)

/A - NOT APPLICABLE
1) - 29 OF THE TOTAL 324 PROPOSED PARKING SPACES ARE BANKED FOR FUTURE USE.

Overall Parking Analysis Table							
Tenant	Sq-Ft	Spaces Req'd	# of Employees on Max. Shift	Spaces Req'd	Dining Seats	Spaces Req'd	Total Spaces Req'd
BIG LOTS	30,000 SF	120.0	7	3.5	N/A	0	123.50
PLANET FITNESS	14,806 SF	59.2	5	2.5	N/A	0	61.72
FAMILY DOLLAR	10,000 SF	40.0	4	2	N/A	0	42.00
NAPA AUTO PARTS	5,418 SF	21.67	4	2	N/A	0	23.67
MCDONALD'S	4,317 SF	0	10	5	80	20	25
GENTLE DENTAL	2,689 SF	10.76	10	5	N/A	0	15.76
DUNKIN DONUTS	2,400 SF	0	7	3.5	22	5.5	9.00
AUTO ER	2,000 SF	8.0	2	1	N/A	0	9.00
SUBWAY	1,243 SF	0.0	5	2.5	24	6	8.50
H&R BLOCK	1,193 SF	4.77	3	1.5	N/A	0	6.27
TOTALS	92,531 SF	-	-	-	-	-	324.42



STREET ADDRESS SWAN STREET@ CORNISH STREET EXT.		APPROVED McDONALD
CITY METHUEN	STATE MASSACHUSETTS	STATUS
		DATE
		BY
COUNTY ESSEX		DRAWN BY: 12/31/13 EGD
		PLAN CHECKED
		JAK
		AS-BUILT
REGIONAL DWG. NO	PLAN DESCRIPTION OVERALL SITE PLAN	SHEET NO. C-4 OF 16



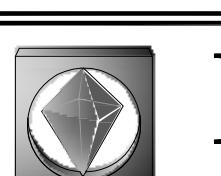
**Know what's below.
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C/O ALLEN ASSOCIATES PROPERTIES, INC.
NEWTON CENTRE STREET, SUITE 403
NEWTON CENTRE, MA 02459-0003

APPLICANT:
McDONALD'S USA, LLC
C/O BOHLER ENGINEERING
352 TURNPIKE ROAD
SOUTHBOROUGH, MA 01772

PARCEL:
MAP: J14, PARCELS: 816-96-11, 816-96-11B, 816-96-11C
SWAN STREET & CORNISH STREET EXTENSION
CITY OF METHUEN
ESSEX COUNTY, MA



BOHLER ENGINEERING

CIVIL & CONSULTING ENGINEERS
SURVEYORS
PROJECT MANAGERS
ENVIRONMENTAL CONSULTANTS
LANDSCAPE ARCHITECTS

CORPORATE OFFICE:
◆ WARREN, NJ

OFFICES:
◆ SOUTHEBRY
◆ BOWIE, MD
◆ TOWSON, MD
◆ ALBANY, NY
◆ RONKONKOMA, NY
◆ CENTERVILLE, MD

THE INFORMATION, DESIGN AND CONTENT OF THIS PLAN ARE PROPRIETARY AND SHALL NOT BE COPIED OR REPRODUCED WITHOUT THE EXPRESS WRITTEN AUTHORIZATION FROM BOHLER ENGINEERING, ONLY APPROVED, SIGNED AND SEALED PLANS ARE LEGAL.

**352 TURNPIKE ROAD
SOUTHBOROUGH, MA 01772**
Phone: (508) 480-9900
Fax: (508) 480-9080
www.BohlerEngineering.com

BOROUGH, MA ◆ CHALFONT, PA
MD ◆ PHILADELPHIA, PA
N, MD ◆ STERLING, VA
, NY ◆ WARRENTON, VA
NKOMA, NY ◆ FORT LAUDERDALE, FL
R VALLEY, PA ◆ TAMPA, FL

THIS PLAN TO BE UTILIZED FOR SITE
GRADING PURPOSES ONLY

**REFER TO GENERAL NOTES SHEET
FOR GRADING & UTILITY NOTES**

STREET ADDRESS

STREET ADDRESS

SWAN STREET@ CORNISH STREET EXT.

CITY STATE
METHUEN MASSACHUSETTS

COUNTY
ESSEX

REGIONAL DWG. NO	PLAN DESCRIPTION
-	GRADING & DRAINAGE PLAN

REV	DATE	DESCRIPTION	BY
1	1/22/14	REVISE SIGN TABLE	EGD
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9	1/21/15	ISSUED FOR COMMUNITY DEVELOPMENT BOARD ENDORSEMENT	EGD

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SIGNATURE _____

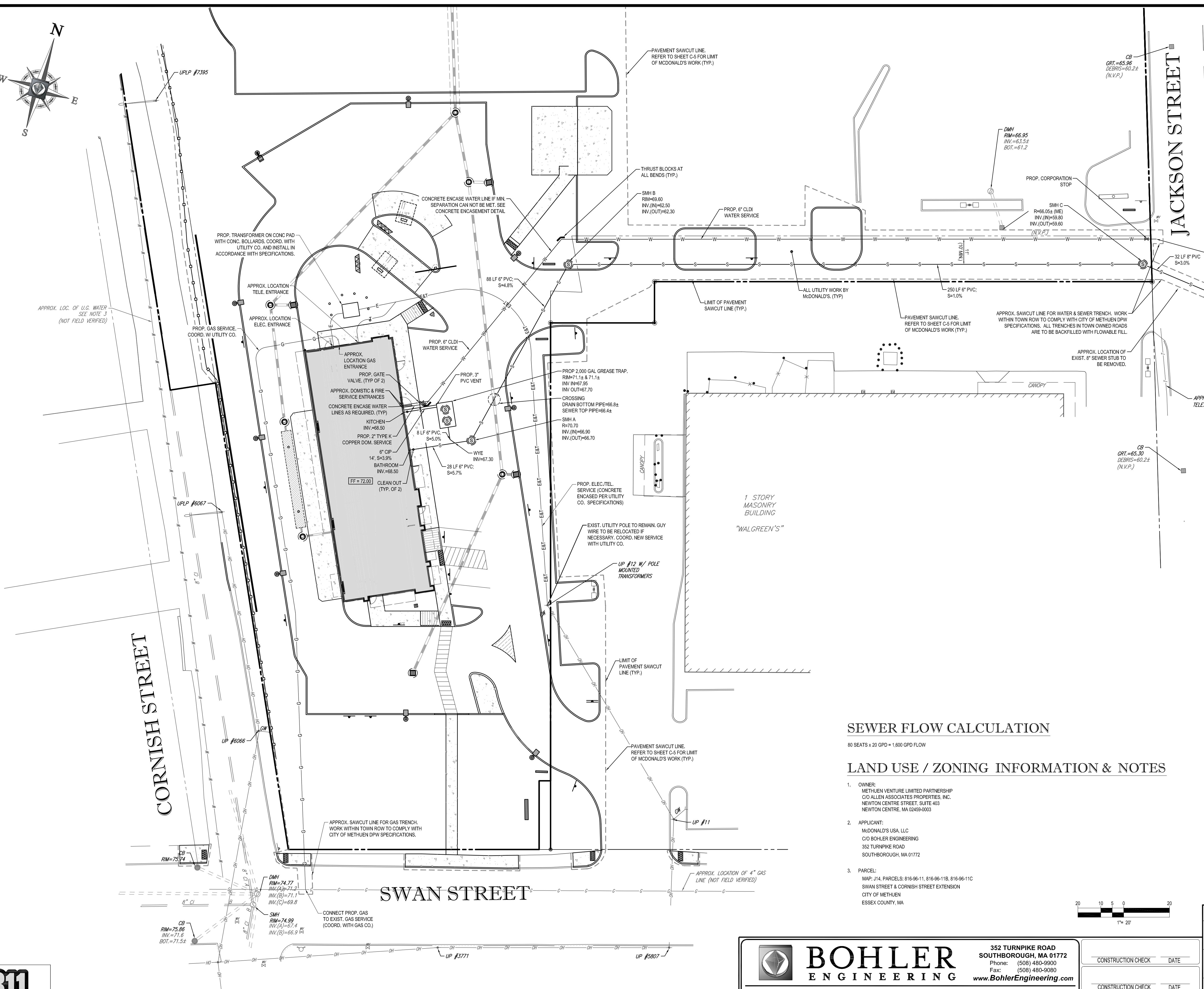
DOVED McDONALD'S AGENT

STATUS	DATE	BY
DRAWN BY:	12/31/13	EGD

PLAN CHECKED		JAK
AS-BUILT		
SHEET NO.		
C-6		



**Know what's below.
Call before you dig.**



SEWER FLOW CALCULATION

$$80 \text{ SEATS} \times 20 \text{ GPD} = 1,600 \text{ GPD FLOW}$$

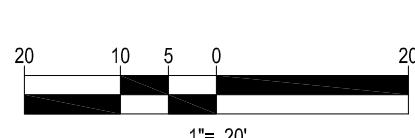
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SWAN STREET & CORNISH STREET EXTENSION
CITY OF METHUEN
ESSEX COUNTY, MA



APPROVED BY THE COMMUNITY DEVELOPMENT BOARD

TE

THIS PLAN TO BE UTILIZED FOR UTILITIES PURPOSES ONLY

**REFER TO GENERAL NOTES SHEET
FOR GRADING & UTILITY NOTES**

STREET ADDRESS
SWAN STREET@ CORNISH STREET EX



EROSION & SEDIMENT CONTROL NOTES

- ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE DONE AS SET FORTH IN THE MOST CURRENT STATE SEDIMENT AND EROSION CONTROL MANUAL.
- THOSE AREAS UNDERGOING ACTUAL CONSTRUCTION WILL BE LEFT IN AN UNTREATED OR UNVEGETATED CONDITION FOR A MINIMUM TIME. AREAS SHALL BE PERMANENTLY STABILIZED WITHIN 15 DAYS OF FINAL GRADING AND TEMPORARILY STABILIZED WITHIN 30 DAYS OF INITIAL DISTURBANCE OF THE SOIL. IF THE DISTURBANCE IS WITHIN 100 FEET OF A STREAM OR POND, THE AREA SHALL BE STABILIZED WITHIN 7 DAYS OR PRIOR TO ANY STORM EVENT (THIS WOULD INCLUDE WETLANDS).
- SEDIMENT BARRIERS (SILT FENCE, HAY BARRIERS, ETC.) SHOULD BE INSTALLED PRIOR TO ANY SOIL DISTURBANCE OF THE CONTRIBUTING DRAINAGE AREA ABOVE THE SITE. MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL AREAS WITH SLOPES GREATER THAN 15% AFTER OCTOBER 1ST THE SAME APPLIES FOR ALL SLOPES GREATER THAN 8%.
- INSTALL SILT FENCE AT TOE OF SLOPE TO RETAIN SILT FROM RUNOFF. SEE SILT FENCE DETAIL FOR PROPER INSTALLATION. SILT FENCE WILL REMAIN IN PLACE FOR ONE YEAR.
- ALL EROSION CONTROL STRUCTURES WILL BE INSPECTED, REPAVED AND/OR REPAVED EVERY 4 DAYS AND IMMEDIATELY FOLLOWING ANY SIGNIFICANT RAINFALL OR SNOW MELT OR WHEN NO LONGER SERVICEABLE DUE TO SEDIMENT ACCUMULATION OR RECOMPOSITION. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE HALF THE HEIGHT OF THE BARRIER. EROSION CONTROL DEVICES SHALL REMAIN IN PLACE AND BE MAINTAINED BY THE CONTRACTOR UNTIL AREAS UPSLOPE ARE STABILIZED BY TURF.
- NO SLOPES, EITHER PERMANENT OR TEMPORARY, SHALL BE STEEPER THAN TWO TO ONE (2:1).
- IF FINAL SEEDING OF THE DISTURBED AREAS IS NOT COMPLETED 45 DAYS PRIOR TO THE FIRST KILLING FROST, USE TEMPORARY MULCH (DORMANT SEEDING MAY BE ATTEMPTED AS WELL) TO PROTECT THE SITE AND DELAY SEEDING UNTIL THE NEXT RECOMMENDED SEEDING PERIOD.
- TEMPORARY SEEDING OF DISTURBED AREAS THAT HAVE NOT BEEN FINAL GRADED SHALL BE COMPLETED 45 DAYS PRIOR TO THE FIRST KILLING FROST TO PROTECT FROM SPRING RUNOFF PROBLEMS.
- DURING THE CONSTRUCTION PHASE, INTERCEPTED SEDIMENT WILL BE RETURNED TO THE SITE AND REGRADED ONTO OPEN AREAS.
- REVEGETATION MEASURES WILL COMMENCE UPON COMPLETION OF CONSTRUCTION EXCEPT AS NOTED ABOVE. ALL DISTURBED AREAS NOT OTHERWISE STABILIZED WILL BE GRADED, SMOOTHED, AND PREPARED FOR FINAL SEEDING AS FOLLOWS:

 - SIX INCHES OF LOAM WILL BE SPREAD OVER DISTURBED AREAS AND SMOOTHED TO A UNIFORM SURFACE.
 - APPLY LIMESTONE AND FERTILIZER ACCORDING TO SOIL TEST, IF SOIL TESTING IS NOT FEASIBLE ON SMALL OR VARIABLE SITES, OR WHERE TIMING IS CRITICAL, FERTILIZER MAY BE APPLIED AT THE RATE OF 800 LB PER ACRE OR 18.4 LB PER 1,000 SF USING 10-20-20 OR EQUIVALENT, APPLY GROUND LIMESTONE (EQUIVALENT TO 50% CALCIUM PLUS MAGNESIUM OXIDE) AT A RATE OF 3 TONS PER ACRE (138 LB PER 1,000 SF).
 - FOLLOWING SEED BED PREPARATION, DITCHES AND BACK SLOPES WILL BE SEEDED TO A MIXTURE OF 4% CREEPING RED FESCUE, 5% REDTOP, AND 45% TALL FESCUE. THE LAWN AREAS WILL BE SEEDED TO A PREMIUM TURF MIXTURE OF 44% KENTUCKY BLUE GRASS, 44% CREEPING RED FESCUE, AND 12% PERENNIAL RYEGRASS; SEEDING RATE IS 1.03 LBS PER 1,000 SF. LAWN QUALITY SOD MAY BE SUBSTITUTED FOR SEED.
 - HAY MULCH AT THE RATE OF 70-90 LBS PER 1,000 SF. A HYDRO-APPLICATION OF WOOD OR PAPER FIBER SHALL BE APPLIED FOLLOWING SEEDING. A SUITABLE BINDER SUCH AS CURASOL OR RMB PLUS WILL BE USED ON HAY MULCH FOR WIND CONTROL.

- ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED ONCE THE SITE IS STABILIZED.
- WETLANDS WILL BE PROTECTED WITH HAYBALES AND/OR SILT FENCE INSTALLED AT THE EDGE OF THE WETLAND OR THE BOUNDARY OF WETLAND DISTURBANCE.
- ALL AREAS WITHIN 100 FEET OF A FLAGGED WETLAND OR STREAM SHALL HAVE AN EXPOSURE WINDOW OF NOT MORE THAN 7 DAYS.
- ALL AREAS WITHIN 100 FEET OF A FLAGGED WETLAND OR STREAM SHALL FOLLOW APPROPRIATE EROSION CONTROL MEASURES PRIOR TO EACH STORM IF NOT BEING ACTIVELY WORKED.

MULCH

LOCATION	PROTECT AREA	MULCH STRAW OR HAY	RATE (1000 SF)
WINDY AREA	SHREDDED OR CHOPPED CORNSTALKS STRAW OR HAY (ANCHORED)*	165-275 POUNDS	100 POUNDS
MODERATE TO HIGH VELOCITY AREAS OR STEEP SLOPES GREATER THAN 3:1	JUTE MESH OR EXCLOSURE MAT	AS REQUIRED	
GREATER THAN 3:1 (REFER TO GEOTECHNICAL REPORT FOR FINAL DESIGN REQUIREMENT)			

* A HYDRO-APPLICATION OF WOOD, OR PAPER FIBER MAY BE APPLIED FOLLOWING SEEDING. A SUITABLE BINDER SUCH AS CURASOL OR RMB PLUS SHALL BE USED ON HAY MULCH FOR WIND CONTROL.

MULCH ANCHORING
ANCHOR MULCH WITH PEG AND TWINE (1 SQ. YD/BLOCK); MULCH NETTING (AS PER MANUFACTURER); WOOD CELLULOSE FIBER (750 LB/ACRE); CHEMICAL TACK (AS PER MANUFACTURER'S SPECIFICATIONS); USE OF A SERRATED STRAIGHT DISK, WETTING FOR SMALL AREAS AND ROAD DITCHES MAY BE PERMITTED.

EROSION CONTROL NOTES DURING WINTER CONSTRUCTION

- WINTER CONSTRUCTION PERIOD: NOVEMBER 1 THROUGH APRIL 15.
- WINTER EXCAVATION AND EARTHWORK SHALL BE DONE SUCH THAT NO MORE THAN 1 ACRE OF THE SITE IS WITHOUT STABILIZATION AT ANY ONE TIME.
- EXPOSED AREA SHOULD BE LIMITED TO THAT CAN BE MULCHED IN ONE DAY PRIOR TO ANY SNOW EVENT.
- CONTINUATION OF EARTHWORK OPERATION ON ADDITIONAL AREAS SHALL NOT BEGIN UNTIL THE EXPOSED SOIL SURFACE ON THE AREA BEING WORKED HAS BEEN STABILIZED SUCH THAT NO LARGER AREA OF THE SITE IS WITHOUT EROSION CONTROL PROTECTION AS LISTED IN ITEM 2 ABOVE.
- AN AREA SHALL BE CONSIDERED TO HAVE BEEN STABILIZED WHEN EXPOSED SURFACES HAVE BEEN EITHER MULCHED WITH STRAW OR HAY AT A RATE OF 100 LB. PER 1,000 SQUARE FEET (WITH OR WITHOUT SEEDING) OR DORMANT SEEDED, MULCHED AND ADEQUATELY ANCHORED BY AN APPROVED ANCHORING TECHNIQUE.
- BETWEEN THE DATES OF OCTOBER 15 AND APRIL 1ST, LOAM OR SEED WILL NOT BE REQUIRED, DURING PERIODS OF ABOVE FREEZING TEMPERATURES THE SLOPES SHALL BE FINE GRADED AND EITHER PROTECTED WITH MULCH OR TEMPORARILY SEEDED AND THE EXPOSED AREA SHOULD BE LIMITED TO THAT CAN BE MULCHED IN ONE DAY PRIOR TO ANY SNOW EVENT. THE DORMANT SEEDED AT A RATE OF 100 LB. PER 1,000 SQUARE FEET (WITH OR WITHOUT SEEDING) AND THEN MULCHED. IF CONSTRUCTION CONTINUES DURING FREEZING WEATHER, ALL EXPOSED AREAS SHALL BE CONTINUOUSLY GRADED BEFORE FREEZING AND THE SURFACE TEMPORARILY PROTECTED FROM EROSION BY THE APPLICATION OF MULCH. SLOPES SHALL NOT BE LEFT UNEXPOSED OVER THE WINTER OR ANY OTHER EXTENDED TIME OF WORK SUSPENSION UNLESS TREATED IN THE ABOVE MANNER, UNTIL SUCH TIME AS WEATHER CONDITIONS ALLOW DITCHES TO BE FINISHED WITH THE PERMANENT SURFACE TREATMENT. EROSION SHALL BE CONTROLLED BY THE INSTALLATION OF BALES OF HAY OR STONE CHECK DAMS IN ACCORDANCE WITH THE STANDARD DETAILS.
- MULCHING REQUIREMENTS:

 - BETWEEN THE DATES OF NOVEMBER 1ST AND APRIL 15TH ALL MULCH SHALL BE ANCHORED BY EITHER PEG LINE, MULCH NETTING OR WOOD CELLULOSE FIBER.
 - MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL DRAINAGE WAYS WITH A SLOPE GREATER THAN 3% FOR SLOPE EXPOSED TO DIRECT WINDS AND FOR ALL OTHER SLOPES GREATER THAN 8%.
 - MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL AREAS WITH SLOPES GREATER THAN 15% AFTER OCTOBER 1ST THE SAME APPLIES FOR ALL SLOPES GREATER THAN 8%.

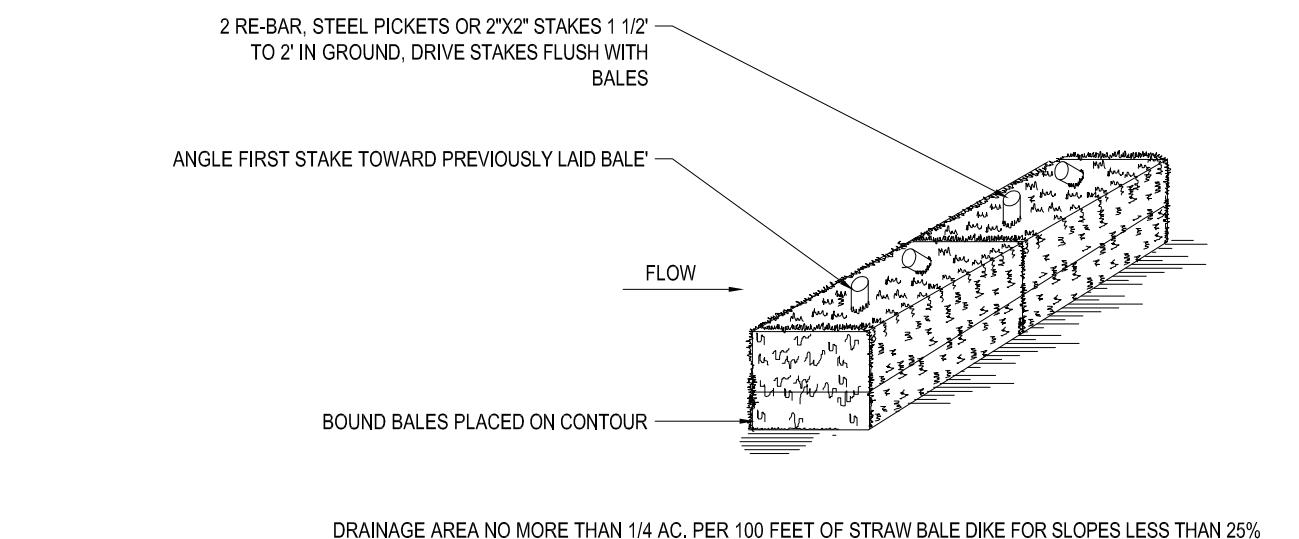
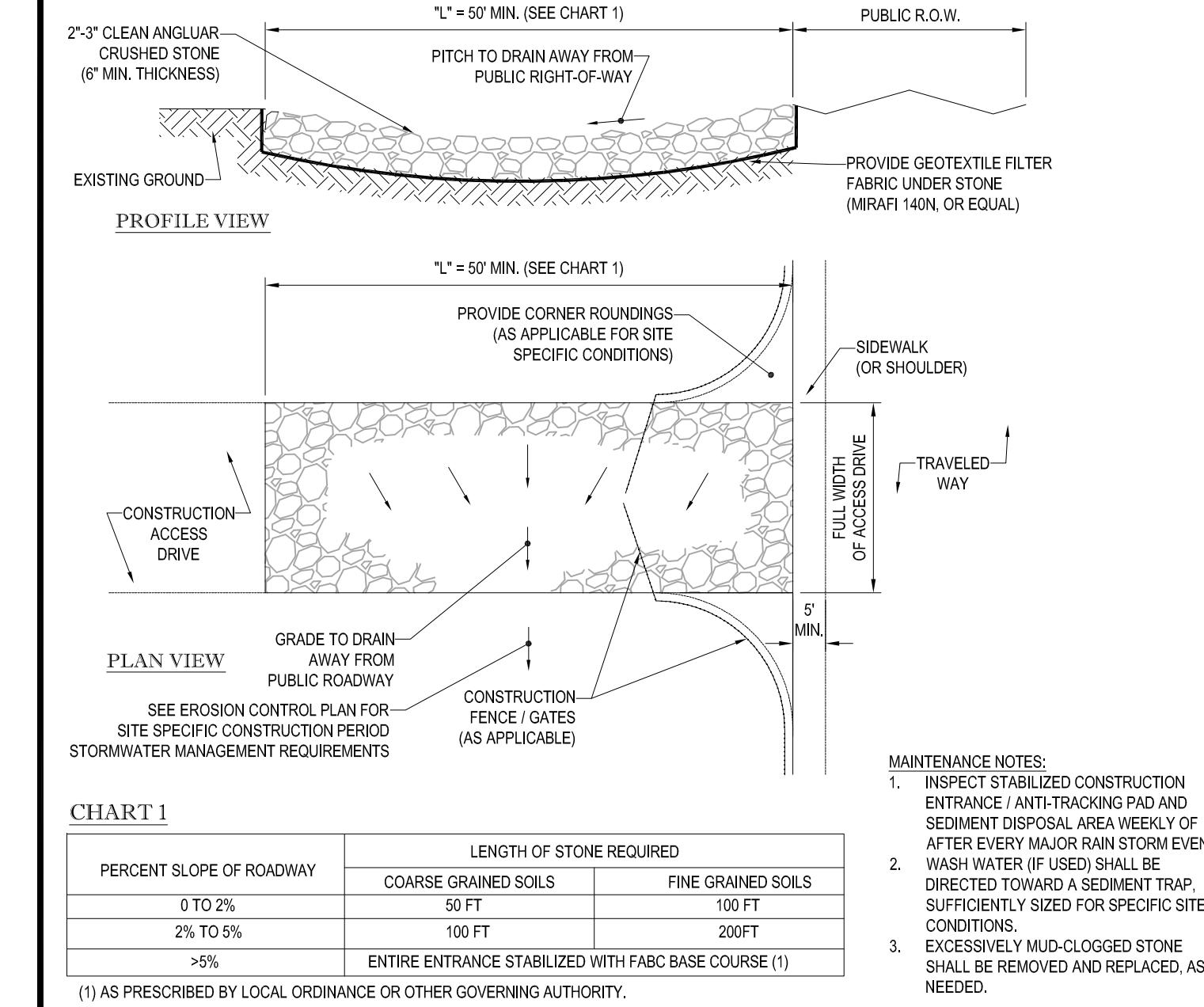
- AFTER NOVEMBER 1ST THE CONTRACTOR SHALL APPLY DORMANT SEEDING OR MULCH AND ANCHORING ON ALL BARE EARTH AT THE END OF EACH WORKING DAY.
- DOING THE WINTER CONSTRUCTION PERIOD ALL SNOW SHALL BE REMOVED FROM AREAS OF SEEDING AND MULCHING PRIOR TO PLACEMENT.
- STOCKPILING OF MATERIALS (DIRT, WOOD, CONSTRUCTION MATERIALS, ETC.) MUST REMAIN COVERED AT ALL TIMES TO MINIMIZE ANY DUST PROBLEMS THAT MAY OCCUR WITH ADJACENT PROPERTIES AND TO PROVIDE MAXIMUM PROTECTION AGAINST EROSION RUNOFF.
- EXISTING CATCH BASIN STRUCTURES SHALL BE PROTECTED UNTIL SUCH TIME AS THEY ARE REMOVED.



CONSTRUCTION SEQUENCE

THE FOLLOWING CONSTRUCTION SEQUENCE IS RECOMMENDED:

- INSTALLATION OF STABILIZED CONSTRUCTION ENTRANCE/EXIT (AS SHOWN)
- INSTALLATION OF EROSION CONTROL BARRIER (HAYBALES AND SILT FENCE) (AS SHOWN)
- INSTALLATION OF INLET PROTECTION IN STREET (AS SHOWN)
- DEMOLITION OF EXISTING SITE STRUCTURES (SEE DEMOLITION PLAN)
- DEMOLITION OF EXISTING SITE PAVEMENT AND AMENITIES (SEE DEMOLITION PLAN)
- CLEARING AND GRUBBING
- INSTALLATION OF TEMPORARY SWALES AND SEDIMENT BASINS
- EARTHWORK AND EXCAVATION/FILLING AS NECESSARY
- CONSTRUCTION OF UTILITIES
- STABILIZE PERMANENT LAWN AREAS AND SLOPES WITH TEMPORARY SEEDING
- INSTALLATION OF INLET PROTECTION ON-SITE UTILITIES (AS SHOWN)
- CONSTRUCTION OF BUILDINGS
- CONSTRUCTION OF ALL CURBING AND LANDSCAPE ISLANDS AS INDICATED ON THE PLANS
- SPREAD TOPSOIL ON SLOPED AREAS AND SEED AND MULCH
- FINAL GRADING OF ALL SLOPED AREAS
- PLACE 6" TOPSOIL ON SLOPES AFTER FINAL GRADING COMPLETED. FERTILIZE, SEED, AND MULCH SEED MIXTURE TO BE INSTALLED REQUIRED.
- REMOVAL OF THE TEMPORARY SEDIMENT BASINS
- PAVE PARKING LOT
- LANDSCAPING PER LANDSCAPING PLAN
- REMOVE EROSION CONTROLS AS DISTURBED AREAS BECOME STABILIZED TO 70% STABILIZATION OR GREATER.



NOTES:
1. BALES SHALL BE PLACED AT THE TOP OF A SLOPE OR ON THE CONTOUR AND IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT BALES.
2. EACH BALE SHALL BE PLACED SO THE BINDINGS ARE HORIZONTAL.
3. BALES SHALL BE SECURELY ANCHORED IN PLACE BY EITHER TWO STAKES OR RE-BARS DRIVEN THROUGH THE BALE. THE FIRST STAKE IN EACH BALE SHALL BE DRIVEN TOWARD THE PREVIOUSLY LAID BALE AT AN ANGLE TO FORCE THE BALES TOGETHER. STAKES SHALL BE DRIVEN FLUSH WITH THE BALE.
4. INSPECTION SHALL BE FREQUENT AND REPAIR/REPLACEMENT SHALL BE PROMPTLY AS NEEDED.
5. BALES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS SO AS NOT TO BLOCK OR IMPEDIE STORM FLOW OR DRAINAGE.

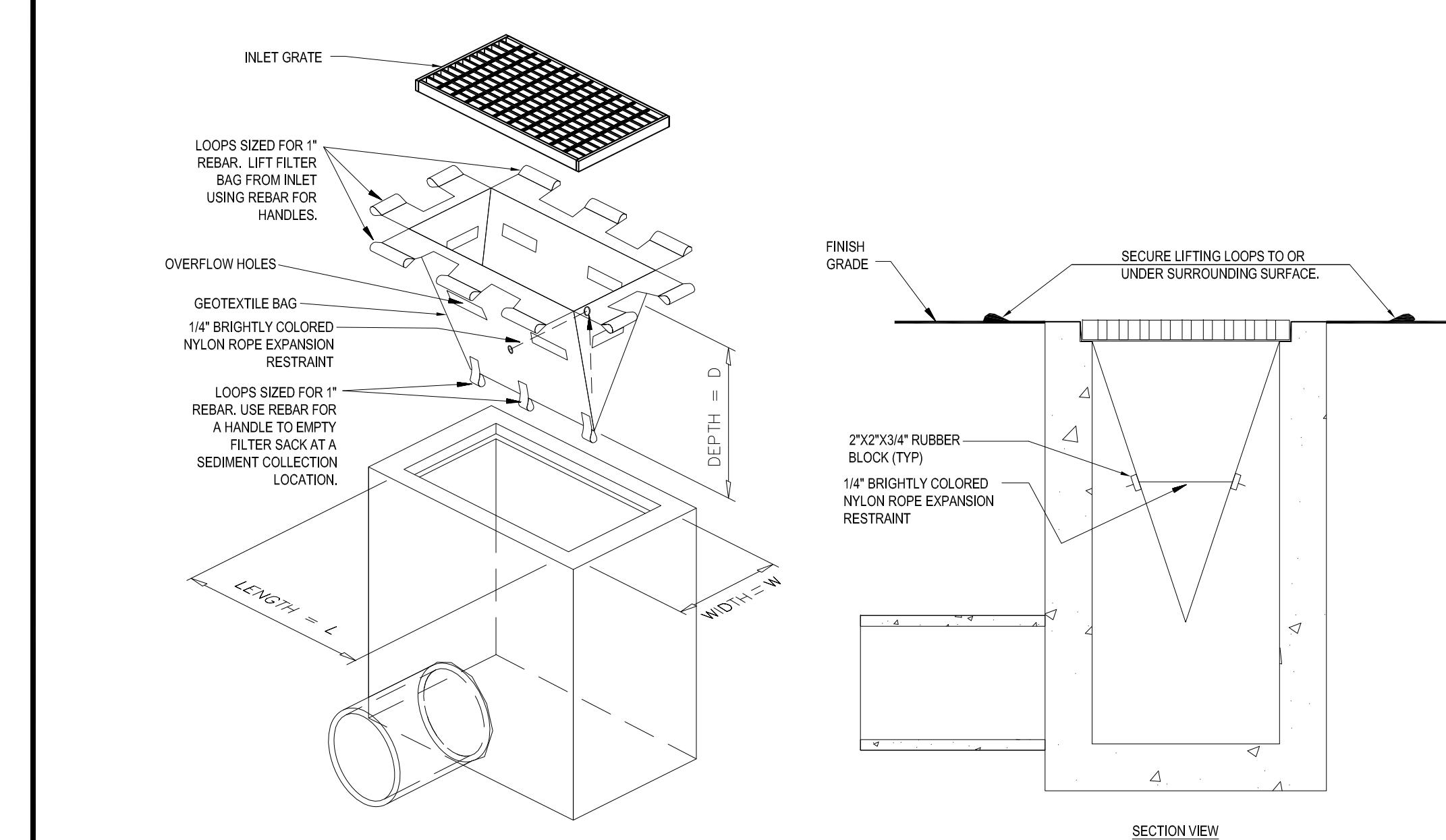
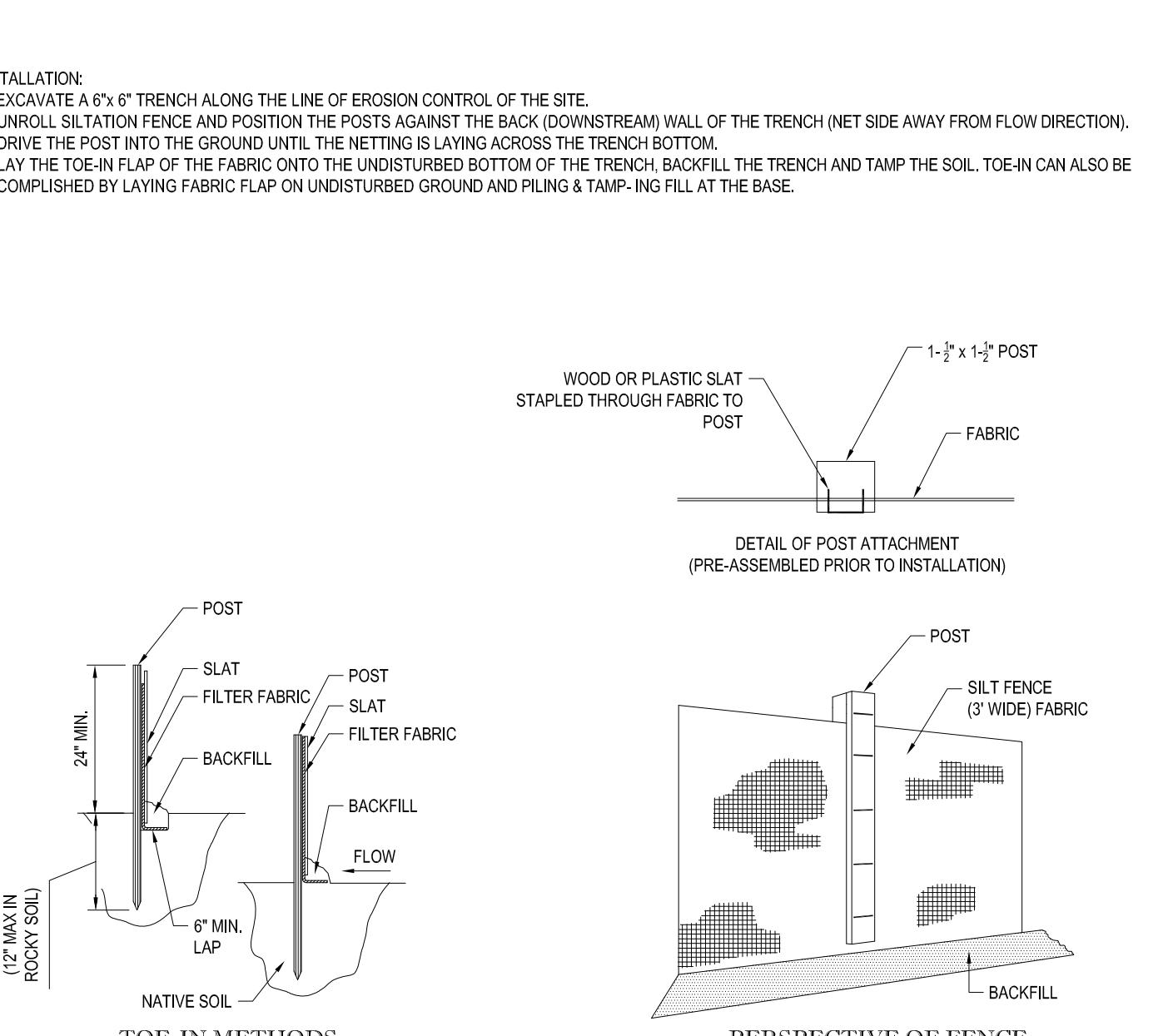
REV	DATE	DESCRIPTION
1	1/22/14	REVISE SIGN TABLE
2	1/31/14	REVISES PER CITY STAFF
3	2/19/14	REVISE PETITION SUBMISSION
4	5/19/14	ADDITIONAL DETAILING
5	9/2/14	REVISED PER COMMENT LETTER
6	10/2/14	REVISED PER STAFF COMMENT
7	11/6/15	REVISED FOR COMMUNITY DEVELOPMENT BOARD ENDORSEMENT
8	1/21/15	ISSUED FOR COMMUNITY DEVELOPMENT BOARD ENDORSEMENT
9	1/21/15	

STABILIZED CONSTRUCTION ENTRANCE

N.T.S.

STRAW BAILE DETAIL

N.T.S.



LOW TO MODERATE FLOW GEOTEXTILE FABRIC SPECIFICATION TABLE		
PROPERTIES	TEST METHOD	UNITS
GRAB TENSILE STRENGTH	ASTM D-432	300 LBS
GRAB TENSILE ELONGATION	ASTM D-432	20 %
PUNCTURE	ASTM D-4833	120 LBS
MULLEN BURST	ASTM D-3786	800 PSI
TRIAXIAL TEAR	ASTM D-433	120 LBS
UV RESISTANCE	ASTM D-433	80 %
APPARENT OPENING SIZE	ASTM D-4761	40 US SIEVE
FLOW RATE	ASTM D-4491	40 GALLONS/100 FT
PERMITTIVITY	ASTM D-4491	0.55 SEC-1

MODERATE TO HIGH FLOW GEOTEXTILE FABRIC SPECIFICATION TABLE		
PROPERTIES	TEST METHOD	UNITS
GRAB TENSILE STRENGTH	ASTM D-432	265 LBS
GRAB TENSILE ELONGATION	ASTM D-432	20 %
PUNCTURE	ASTM D-4833	135 LBS
MULLEN BURST	ASTM D-3786	400 PSI
TRIAXIAL TEAR	ASTM D-433	45 LBS
UV RESISTANCE	ASTM D-435	90 %
APPARENT OPENING SIZE	ASTM D-4761	20 US SIEVE
FLOW RATE	ASTM D-4491	200 GALLONS/100 FT
PERMITTIVITY	ASTM D-4491	1.5 SEC-1

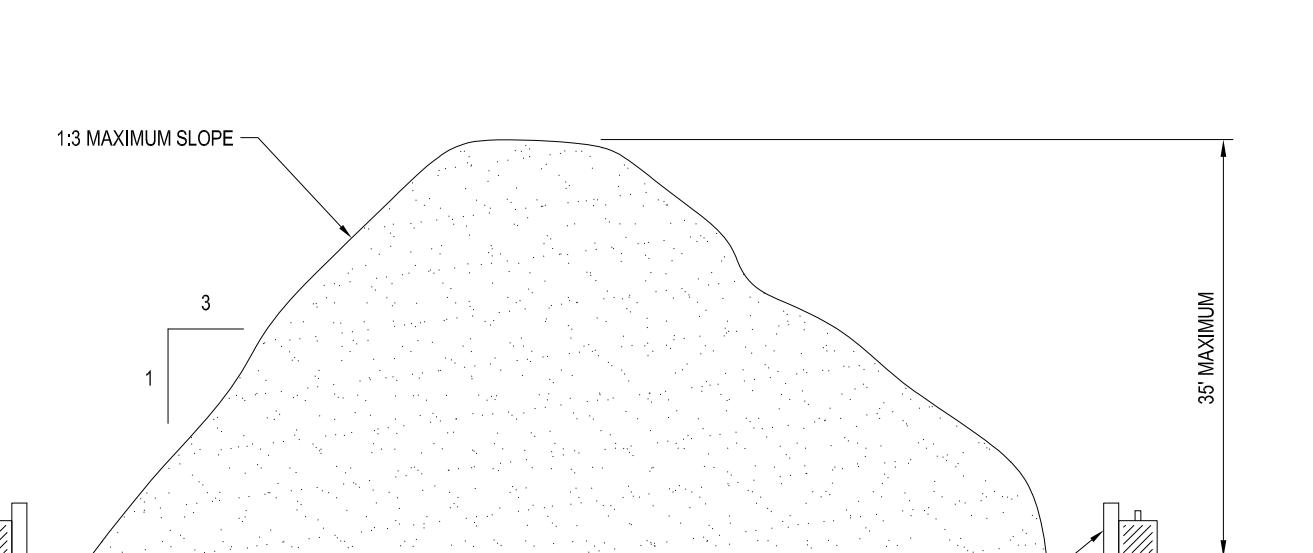
- REMOVE TRAPPED SEDIMENT WHEN BRIGHTLY COLORED EXPANSION RESTRAINT CAN NO LONGER BE SEEN.
- GEOTEXTILE SHALL BE A WOVEN POLYPROPYLENE FABRIC THAT MEETS OR EXCEEDS REQUIREMENTS IN THE SPECIFICATIONS TABLE.
- PLACE AN OIL ABSORBENT PAD OR PILLOW OVER INLET BOX AND SPILL SPOT TO PROTECT INLET.
- INSPECT FOR REGULATORY REQUIREMENTS.
- THE WIDTH, "W", OF THE FILTER SACK SHALL MATCH THE INSIDE WIDTH OF THE GRATED INLET BOX.
- THE LENGTH, "L", OF THE FILTER SACK SHALL BE BETWEEN 18 INCHES AND 36 INCHES.
- THE LENGTH, "L", OF THE FILTER SACK SHALL MATCH THE INSIDE LENGTH OF THE GRATED INLET BOX.

DO NOT USE IN PAVED AREAS WHERE PONDING MAY CAUSE TRAFFIC HAZARDS.

TO BE USED IN EXISTING RIGHT OF WAY

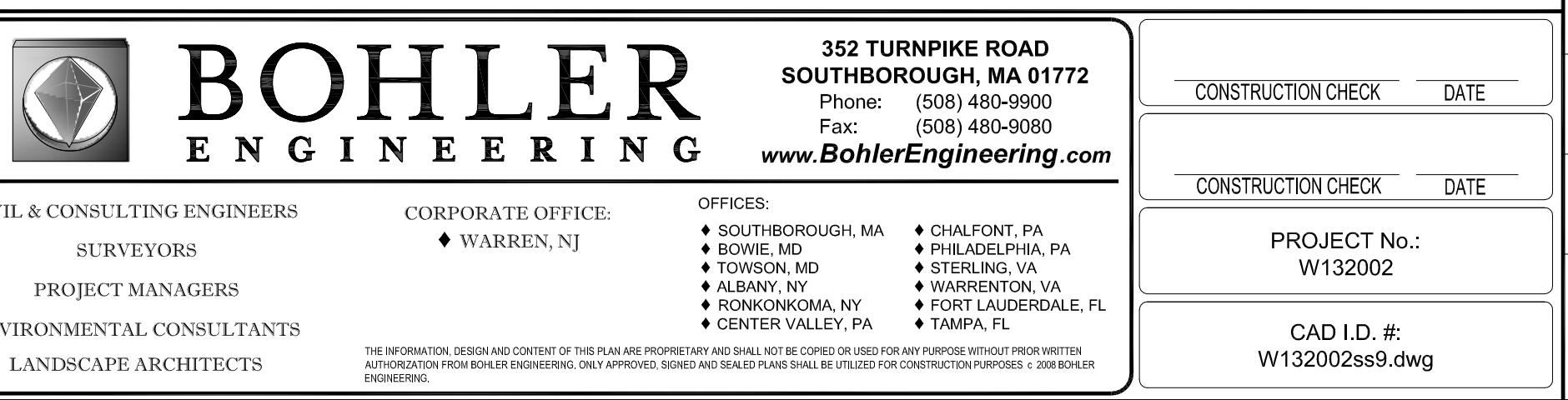
TYP. SILTATION FENCE DETAIL

N.T.S.



TEMPORARY STOCKPILE DETAIL

N.T.S.



APPROVED BY THE COMMUNITY DEVELOPMENT BOARD

DATE: _____

STREET ADDRESS
SWAN STREET@ CORNISH STREET EXT.
CITY

LANDSCAPE SPECIFICATIONS

1. SCOPE OF WORK:
THE LANDSCAPE CONTRACTOR SHALL BE REQUIRED TO PERFORM ALL CLEAING, FINISHED GRADING, SOIL PREPARATION, PERMANENT SEEDING ON SODDING, PLANTING AND MULCHING INCLUDING ALL LABOR, MATERIALS, TOOLS AND EQUIPMENT NECESSARY FOR THE COMPLETION OF THIS PROJECT, UNLESS OTHERWISE CONTRACTED BY THE GENERAL CONTRACTOR.

2. MATERIALS:
A. GENERAL - ALL HARDSCAPE MATERIALS SHALL MEET OR EXCEED SPECIFICATIONS AS OUTLINED IN THE STATE DEPARTMENT OF TRANSPORTATIONS SPECIFICATIONS.

B. TOPSOIL - NATURAL, FLAMABLE, LOAM, SILT, SOIL HAVING AN ORGANIC CONTENT NOT LESS THAN 5%, A PH RANGE BETWEEN 4.5-7.0. IT SHALL BE FREE OF DEBRIS, ROCKS LARGER THAN ONE INCH (1"), WOOD, ROOTS, VEGETABLE MATTER AND CLAY CLOWS.

C. LAWN - ALL DISTURBED AREAS TO BE TREATED WITH A MINIMUM 6" THICK LAYER OF TOPSOIL, OR AS DIRECTED BY THE LOCAL ORDINANCE OR CLIENT, AND SEEDED OR SODDED IN ACCORDANCE WITH THE PERMANENT STABILIZATION METHODS STATED ON THE LANDSCAPE PLAN.

D. SOIL - SOIL SHALL BE FRESH, CLEAN NEW CROP SEED.

E. SOD SHALL BE STRONGLY ROOTED, WEED AND DISEASE-FREE WITH A UNIFORM THICKNESS. SOD INSTALLED ON SLOPES GREATER THAN 4:1 SHALL BE PEGGED TO HOLD SOD IN PLACE.

F. MULCH - ALL PLANTING BEDS SHALL BE MULCHED WITH A 2" THICK LAYER OF DOUBLE SHREDDED HARDWOOD BARK MULCH, UNLESS OTHERWISE STATED ON THE LANDSCAPE PLAN AND/OR DETAILS.

G. FERTILIZER:
I. FERTILIZER SHALL BE DELIVERED TO THE SITE MIXED AS SPECIFIED IN THE ORIGINAL UNOPENED STANDARD BAGS SHOWING WEIGHT, ANALYSIS AND NAME OF MANUFACTURER.

FERTILIZER TEST PER TON. TEST PER TON PRIOR TO USE.

II. FOR THE PURPOSE OF BIDDING, ASSUME THAT FERTILIZER SHALL BE 10% NITROGEN, 6% PHOSPHORUS AND 4% POTASSIUM BY WEIGHT. A FERTILIZER SHOULD NOT BE SELECTED FOR THE BIDDING.

F. BAGS OF FERTILIZER:

I. ALL PLANTS SHALL IN ALL CASES CONFORM TO THE REQUIREMENTS OF THE "AMERICAN STANDARD FOR NURSERY STOCK" (ANSI Z60.1), LATEST EDITION, AS PUBLISHED BY THE AMERICAN NURSERY & LANDSCAPE ASSOCIATION (FORMERLY THE AMERICAN ASSOCIATION OF NURSERYMEN).

II. IN ALL CASES, BOTANICAL NAMES SHALL TAKE PRIORITY OVER COMMON NAMES FOR ANY AND ALL PLANT MATERIAL.

III. PLANTS SHALL BE LEGIBLY TAGGED WITH THE PROPER NAME AND SIZE. TAGS SHALL BE REMOVED AT LEAST ONE PLANT OF EACH SPECIES FOR VERIFICATION PURPOSES DURING PLANTING.

IV. TREES WITH BARK OF THE BARK SUN SCALES, DISFIGURATION OR FRESH CUTS OF LIMBS OVER 1/2", WHICH HAVE NOT BEEN COMPLETELY CALLED, SHALL BE REJECTED.

PLANTS SHALL NOT BE BOUD WITH ROOTS OR ROPE AT ANY TIME SO AS TO DAMAGE THE BARK OR BREAK BRANCHES.

V. TREES AND SHRUBS SHALL BE MEASURED TO THE AVERAGE HEIGHT OR SPREAD OF THE SHRUB, AND NOT TO THE LONGEST BRANCH.

VI. TREES AND SHRUBS SHALL BE HANDLED WITH CARE BY THE ROOT BALL.

7. GENERAL WORK PROCEDURES:
A. CONTRACTOR TO UTILIZE WORKMAN-LIKE INDUSTRY STANDARDS IN PERFORMING ALL LANDSCAPE CONSTRUCTION. THE SITE IS TO BE LEFT IN A CLEAN STATE AT THE END OF EACH WORKDAY. ALL DEBRIS, MATERIALS AND TOOLS SHALL BE PROPERLY STORED, STOCKPILED OR DISPOSED OF.

B. WASTE MATERIALS AND DEBRIS SHALL BE COMPLETELY DISPOSED OF AT THE CONTRACTOR'S EXPENSE. DEBRIS SHALL NOT BE BURIED, INCLUDING ORGANIC MATERIALS, BUT SHALL BE REMOVED COMPLETELY FROM THE SITE.

4. SITE PREPARATIONS:
A. BEFORE AND DURING PRELIMINARY GRADING AND FINISHED GRADING, ALL WEEDS AND GRASSES SHALL BE DUG OUT BY THE ROOTS AND DISPOSED OF IN ACCORDANCE WITH GENERAL WORK PROCEDURES OUTLINED HEREIN.

B. EXISTING PLANTS AND SHRUBS SHALL BE PRUNED TO REMOVE ANY DAMAGED BRANCHES. THE ENTIRE LENGTH OF ANY DAMAGED BRANCH SHALL BE CUT OFF AT THE BRANCH COLLAR.

C. CUTTING SURFACES SHALL BE SMOOTH AND STRAIGHT. ANY EXPOSED ROOTS SHALL BE BURIED WITH CLEAN SHARP TOOLS AND TOPSOIL SHALL BE PLACED AROUND THE REMAINDERS OF THE ROOTS. EXISTING TREES SHALL BE MONITORED ON A REGULAR BASIS FOR ADDITIONAL ROOT OR BRANCH DAMAGE AS A RESULT OF CONSTRUCTION. ROOTS SHALL NOT BE LEFT EXPOSED FOR MORE THAN ONE (1) DAY. CONTRACTOR SHALL WATER EXISTING TREES AS NEEDED TO PREVENT SHOCK OR DECLINE.

D. CONTRACTOR SHALL ARRANGE TO HAVE A UTILITY STAKE-OUT TO LOCATE ALL UNDERGROUND UTILITIES PRIOR TO INSTALLATION OF ANY LANDSCAPE MATERIAL. UTILITY COMPANIES SHALL BE CONTACTED THREE (3) DAYS PRIOR TO THE BEGINNING OF THE WORK.

5. TREE PROTECTION:
A. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING TREES TO REMAIN. A TREE PROTECTION ZONE SHALL BE ESTABLISHED AT THE DRIP LINE OR AT THE LIMIT OF CONSTRUCTION DISTURBANCE, WHICHEVER IS GREATER. LOCAL STANDARDS THAT MAY REQUIRE A MORE STRICT TREE PROTECTION ZONE SHALL BE HONORED.

B. A FORTY-EIGHT INCH (48") HIGH WOODEN SNOW FENCE OR APPROVED EQUAL, MOUNTED ON STEEL POSTS SHALL BE PLACED ALONG THE BOUNDARY OF THE TREE PROTECTION ZONE. POSTS SHALL BE LOCATED AT A MAXIMUM OF EIGHT FEET (8') ON CENTER OR AS INDICATED WITHIN THE TREE PROTECTION DETAIL.

C. WHEN THE TREE PROTECTION FENCING HAS BEEN INSTALLED, IT SHALL BE INSPECTED BY THE APPROVING AGENCY PRIOR TO REMOVAL, GRADING, TREE CLEARING OR ANY OTHER ACTION. THE FENCE ALONG THE TREE PROTECTION ZONE SHALL BE REGULARLY INSPECTED BY THE LANDSCAPE CONTRACTOR AND MAINTAINED UNTIL ALL CONSTRUCTION ACTIVITY HAS BEEN COMPLETED.

D. AT NO TIME SHALL MACHINERY, DEBRIS, FALLEN TREES OR OTHER MATERIALS BE PLACED, STOCKPILED OR LEFT STANDING IN THE TREE PROTECTION ZONE.

6. SOIL MODIFICATIONS:
A. CONTRACTOR SHALL ATTAIN A SOIL TEST FOR ALL AREAS OF THE SITE PRIOR TO CONDUCTING ANY PLANTING. SOIL TESTS SHALL BE PERFORMED BY A CERTIFIED SOIL LABORATORY.

B. LANDSCAPE CONTRACTOR SHALL REPORT ANY SOIL OR ORGANIC CONDITIONS CONSIDERED DETERMINAL TO THE GROWTH OF PLANT MATERIAL. SOIL MODIFICATIONS, AS SPECIFIED HEREIN, MAY NEED TO BE CONDUCTED BY THE LANDSCAPE CONTRACTOR DEPENDING ON SITE CONDITIONS.

C. THE FOLLOWING AMENDMENTS AND QUANTITIES ARE APPROXIMATE AND ARE FOR BIDDING PURPOSES ONLY. COMPOSITION OF AMENDMENTS SHOULD BE REVISED DEPENDING ON THE OUTCOME OF A TOPSOIL ANALYSIS PERFORMED BY A CERTIFIED SOIL LABORATORY.

I. TO INCREASE SOIL'S ABILITY TO RETAIN WATER AND NUTRIENTS, THOROUGHLY TILT ORGANIC MATTER INTO THE TOP 4-12" USE COMPOSTED LEAF MULCH OR 1 PART PEAT MOSS. PRODUCTS SHOULD BE COMPOSED TO A DARK COLOR AND BE FREE OF IDENTIFIABLE LEAF OR WOOD STRUCTURE. AVOID MATERIAL WITH A HIGHER THAN 7.5.

II. TO INCREASE DRAINAGE, MODIFY HEAVY CLAY OR SILT MORE THAN 40% CLAY OR SILT BY ADDING COMPOSTED PINE BARK (UP TO 30% BY VOLUME) AND/OR AGRICULTURAL GYPSUM.

III. MODIFY EXTREMELY SANDY SOILS (MORE THAN 85%) BY ADDING ORGANIC MATTER AND/OR DRY, SHREDDED CLAY LUMP UP TO 30% OF THE TOTAL MIX.

7. FINISHED GRADING:
A. UNLESS OTHERWISE CONTRACTED, THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION OF TOPSOIL, AND THE ESTABLISHMENT OF FINE-GRADING WITHIN THE DISTURBED AREA OF THE SITE.

B. LANDSCAPE CONTRACTOR SHALL VERIFY THAT SUBGRADE FOR INSTALLATION OF TOPSOIL HAS BEEN ESTABLISHED. THE SUBGRADE OF THE SITE MUST MEET THE FINISHED GRADE LESS THE REQUIRED TOPSOIL THICKNESS ("t").

C. ALL LAWN AND PLANTING AREAS SHALL BE GRADED TO A SMOOTH, EVEN AND UNIFORM PLANE WITH NO AGRUE CHARGE OF SURFACE AS DEPICTED WITHIN THIS SET OF CONSTRUCTION PLANS, UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER OR LANDSCAPE ARCHITECT.

D. ALL PLANTING AREAS SHALL BE GRADED AND MAINTAINED TO ALLOW FREE FLOW OF SURFACE WATER IN AND AROUND THE PLANTING BEDS. STANDING WATER SHALL NOT BE PERMITTED IN PLANTING BEDS.

8. TOPSOIL:
A. CONTRACTOR SHALL PROVIDE A 2" THICK MINIMUM LAYER OF TOPSOIL, OR AS DIRECTED BY THE LOCAL ORDINANCE OR CLIENT, IN ALL PLANTING AREAS. TOPSOIL SHOULD BE SPREAD OVER A PREPARED SURFACE IN A UNIFORM LAYER TO ACHIEVE THE DESRED COMPACTED THICKNESS.

B. ON-SITE TOPSOIL MAY BE USED TO SUPPLEMENT THE TOTAL AMOUNT REQUIRED. TOPSOIL FROM THE SITE MAY BE REJECTED IF IT HAS NOT BEEN PROPERLY REMOVED, STORED AND PROTECTED PRIOR TO CONSTRUCTION.

C. CONTRACTOR SHALL FURNISH THROUGH THE APPROVING AGENCY AN ANALYSIS OF BOTH REMOVED AND ON-SITE TOPSOIL TO BE UTILIZED IN ALL PLANTING AREAS. THE PH AND NUTRIENT LEVELS MAY NEED TO BE ADJUSTED THROUGH SOIL MODIFICATIONS AS NEEDED TO ACHIEVE THE REQUIRED LEVELS AS SPECIFIED IN THE MATERIALS SECTION ABOVE.

9. STANDARD FOR PERMANENT STABILIZATION WITH SOD

METHODS AND MATERIALS

1. CULTIVATED SOD IS PREFERRED OVER NATIVE OR PASTURE SOD. SPECIFY "CERTIFIED SOD," OR OTHER HIGH QUALITY CULTIVATED SOD.

2. SOD SHOULD BE FREE OF WEEDS AND UNDESIRABLE COARSE WEEDY GRASSES.

3. SOD SHOULD BE OF UNIFORM THICKNESS, APPROXIMATELY 6" INCH, PLUS OR MINUS 1/4 INCH, AT THE TIME OF CUTTING. (EXCLUDES TOP GROWTH.)

4. SOD SHOULD BE VIGOROUS AND DENSE, AND BE ABLE TO RETAIN ITS OWN SHAPE AND WEIGHT WHEN SUSPENDED VERTICALLY WITH A FIRM GRASP FROM THE UPPER 10 PERCENT OF THE STRIP. BROKEN PADS OR TORN AND UNVEN ENDS WILL NOT BE ACCEPTABLE.

5. FOR DRAUGHT SITES, A SOD OF KENTUCKY 31 TALL FESCUE AND BLUEGRASS IS PREFERRED OVER A STRAIGHT BLUEGRASS SOD.

6. ONLY FRESH, UNHEATED SOD SHOULD BE USED. SOD SHOULD BE HARVESTED, DELIVERED, AND INSTALLED WITHIN A PERIOD OF 36 HOURS.

7. SITE PREPARATION:
A. GRADE AS NEEDED AND POSSIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR LIMING, FERTILIZING, AND SOIL PREPARATION. ALL GRADING SHOULD BE DONE IN ACCORDANCE WITH STANDARD FOR LAND GRADING.

B. INSTALL NEEDED EROSION CONTROL PRACTICES AND FACILITIES, SUCH AS INTERCEPTOR DITCHES, DIKES AND TERRACES, EROSION STOPS, AND DESILTING BASINS.

II. SOIL PREPARATION

A. APPLY LIMESTONE AND FERTILIZER ACCORDING TO SOIL TESTS SUCH AS THOSE OFFERED BY UNIVERSITIY SOIL TESTING LABORATORY. SOIL SAMPLE MAILERS ARE AVAILABLE FROM THE LOCAL COOPERATIVE EXTENSION SERVICE. IF SOIL TESTS ARE NOT PERFORMED ON-SITE, OR THERE IS NO TIME, THE PERTICULAT FERTILIZER MAY BE APPLIED AT A RATE OF 300 POUNDS PER ACRE OR 11 POUNDS PER 1,000 SQUARE FEET OF 10-10-10 OR EQUIVALENT. IN ADDITION, 300 POUNDS SODA ASH PER ACRE OR EQUIVALENT OF SLOW RELEASE NITROGEN MAY BE USED IN LIEU OF TOP-DRESSING. APPLY LIMESTONE (EQUVALNT TO 50 PERTCENT CALCIUM PLUS MAGNESIUM OXIDES) AS FOLLOWS:

SOD TEXTURE TONS/ACRE LBS/1000 SQ. FT

CLAY, LOAM, LOAM, SILT, LOAM 4 180

SANDY LOAM, LOAM, SILT, LOAM 3 135

LOAMY SAND, SAND 2 90

PULVERIZED LIMESTONE IS PREFERRED FOR MOST SODS SOUTH OF THE NEW BRUNSWICK-TRENTON LINE.

B. WORK LIME AND FERTILIZER INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES WITH A DISC, SPRING TOOTH HARROW, OR OTHER SUITABLE EQUIPMENT. THE FINAL HARROWING OR DISCING OPERATION SHOULD BE ON THE GENERAL CONTOUR. CONTINUE TILLING UNTIL ALL OTHER DEBRIS, SUCH AS WIRE, CABLE, TREE ROOTS, PIECES OF CONCRETE, CLOUDS, LUMPS, OR OTHER UNDESIRABLE MATERIAL.

D. INSPECT SITE JUST BEFORE SEEDING. IF TRAFFIC HAS LEFT THE SOIL COMPACTED, THE AREA MUST BE RE-TILLED AND FIRMED AS ABOVE.

III. SOD PLACEMENT

A. SOD STRIPS SHOULD BE LAYED ON THE CONTOUR, NEVER UP AND DOWN THE SLOPE, STARTING AT THE BOTTOM OF THE SLOPE AND WORKING UP, ON STEEP SLOPES, THE USE OF RODDERS WILL FACILITATE THE WORK AND PREVENT DAMAGE TO THE SOD. DURING PERIODS OF HIGH TEMPERATURE, LIGHTLY IRRIGATE THE SOIL IMMEDIATELY PRIOR TO LAYING THE SOD.

B. PLACE SOD STRIPS WITH SNUG, EVEN JOINTS THAT ARE STAGGERED. OPEN SPACES INVITE EROSION.

C. ROLL OR TAMP SOD IMMEDIATELY FOLLOWING PLACEMENT TO INSURE SOIL CONTACT OF ROOT MAT AND SOIL SURFACE. DO NOT OVERLAP SOD. ALL JOINTS SHOULD BE BUTTED TIGHTLY TO PREVENT Voids WHICH COULD CAUSE LEAKING OF THE ROOTS.

D. ON SLOPES GREATER THAN 1:1, SECURE SOD TO SURFACE WITH WOOD PEGS, WIRE STAPLES, OR SPLIT SHINGLES (8 TO 10 INCHES LONG BY 3/4 INCH WIDE).

E. SURFACE WATER CANNOT ALWAYS BE DIVERTED FROM FLOWING OVER THE FACE OF THE SLOPE, BUT A CAPPING STRIP OF HEAVY DUTY OR PLASTIC NETTING, SECURELY ADDED, ALONG THE CROWN OF THE SLOPE AND EDGES WILL PROVIDE EXTRA PROTECTION AGAINST LIFTING AND UNDERCUTTING OF SOD. THE SAME TECHNIQUE CAN BE USED TO ANCHOR SOD IN WATER CARRYING CHANNELS AND OTHER CRITICAL AREAS. WIRE STAPLES MAY BE USED TO ANCHOR NETTING IN CHANNELS.

F. IMMEDIATELY FOLLOWING INSTALLATION SOD SHOULD BE WATERED UNTIL MOISTURE PENETRATES THE SOIL LAYER BEHIND SOD TO A DEPTH OF 4 INCHES. MANTAIN OPTIMUM MOISTURE FOR AT LEAST TWO WEEKS, AND CONTINUE IRRIGATION THROUGHOUT ENTIRE SEASON.

G. TOP-DRESSING, IF SLOW RELEASE NITROGEN (300 POUNDS 30-0-0 PER ACRE OR EQUIVALENT) IS USED IN ADDITION TO SUGGESTED FERTILIZER, THEN A FOLLOW-UP OF TOP DRESSING IS NOT MANDATORY.

H. SPRING INSTALLATION OF SOD WILL REQUIRE AN APPLICATION OF FERTILIZER SUCH AS 10-20-10 OR EQUIVALENT AT 500 POUNDS PER ACRE OR 11 POUNDS PER 1,000 SQUARE FEET.

I. FALL INSTALLATION OF SOD WILL REQUIRE THE ABOVE BETWEEN SEPTEMBER 1 AND OCTOBER 15.

P. ALL LAWN AREAS TO BE CULTIVATED TO A DEPTH OF SIX INCHES (6"). ALL DEBRIS EXPOSED FROM EXCAVATION AND CULTIVATION SHALL BE DISPOSED OF IN ACCORDANCE WITH GENERAL WORK PROCEDURES SECTION ABOVE. THE FOLLOWING SHALL BE TILLED INTO THE TOP FOUR INCHES (4") IN TWO DIRECTIONS (QUANTITIES BASED ON A 1,000 SQUARE FOOT AREA FOR DHD PURPOSES ONLY (SEE SPECIFICATION 6.4)).

I. 12 POUNDS GRO-POWER OR APPROVED SOIL CONDITIONER/FERTILIZER.

II. 30 POUNDS NITRO-PURE (COURSE) 30-4-4 BLUE CHIP OR APPROVED NITROGEN FERTILIZER.

J. THE SPREADING OF TOPSOIL SHALL NOT BE CONDUCTED UNDER MUDDY OR FROZEN CONDITIONS.

K. LAWN - ALL DISTURBED AREAS TO BE TREATED WITH A MINIMUM 6" THICK LAYER OF TOPSOIL, OR AS DIRECTED BY THE LOCAL ORDINANCE OR CLIENT, AND SEDED OR SODDED IN ACCORDANCE WITH THE PERMANENT STABILIZATION METHODS STATED ON THE LANDSCAPE PLAN.

L. SOD - NATURAL, FLAMMABLE, LOAM, SILT, SOIL HAVING AN ORGANIC CONTENT NOT LESS THAN 5%, A PH RANGE BETWEEN 4.5-7.0. IT SHALL BE FREE OF DEBRIS, ROCKS LARGER THAN ONE INCH (1"), WOOD, ROOTS, VEGETABLE MATTER AND CLAY CLOWS.

M. SOIL - SOIL SHALL BE FRESH, CLEAN NEW CROP SEED.

N. SOD SHALL BE STRONGLY ROOTED, WEED AND DISEASE-FREE WITH A UNIFORM THICKNESS. SOD INSTALLED ON SLOPES GREATER THAN 4:1 SHALL BE PEGGED TO HOLD SOD IN PLACE.

O. MULCH - ALL PLANTING BEDS SHALL BE MULCHED WITH A 2" THICK LAYER OF DOUBLE SHREDDED HARDWOOD BARK MULCH, UNLESS OTHERWISE STATED ON THE LANDSCAPE PLAN AND/OR DETAILS.

P. FERTILIZER:
I. FERTILIZER SHALL BE DELIVERED TO THE SITE MIXED AS SPECIFIED IN THE ORIGINAL UNOPENED STANDARD BAGS SHOWING WEIGHT, ANALYSIS AND NAME OF MANUFACTURER.

FERTILIZER TEST PER TON. TEST PER TON PRIOR TO USE.

II. FOR THE PURPOSE OF BIDDING, ASSUME THAT FERTILIZER SHALL BE 10% NITROGEN, 6% PHOSPHORUS AND 4% POTASSIUM BY WEIGHT. A FERTILIZER SHOULD NOT BE SELECTED FOR THE BIDDING.

F. BAGS OF FERTILIZER:

I. ALL PLANTS SHALL IN ALL CASES CONFORM TO THE REQUIREMENTS OF THE "AMERICAN STANDARD FOR NURSERY STOCK" (ANSI Z60.1), LATEST EDITION, AS PUBLISHED BY THE AMERICAN NURSERY & LANDSCAPE ASSOCIATION (FORMERLY THE AMERICAN ASSOCIATION OF NURSERYMEN).

II. IN ALL CASES, BOTANICAL NAMES SHALL TAKE PRIORITY OVER COMMON NAMES FOR ANY AND ALL PLANT MATERIAL.

III. PLANTS SHALL BE LEGIBLY TAGGED WITH THE PROPER NAME AND SIZE. TAGS SHALL BE REMOVED AT LEAST ONE PLANT OF EACH SPECIES FOR VERIFICATION PURPOSES DURING PLANTING.

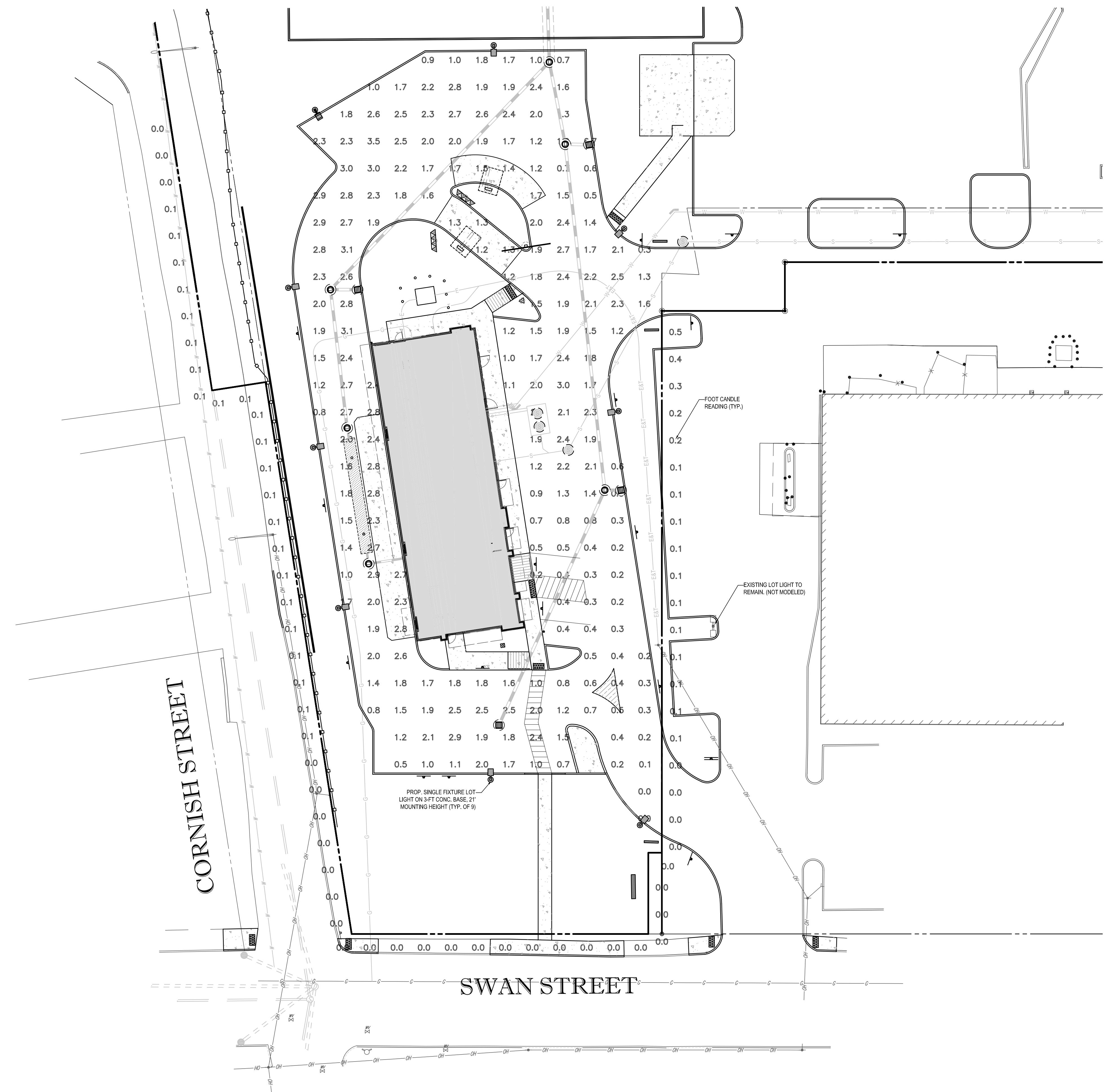
IV. TREES WITH BARK OF THE BARK SUN SCALES, DISFIGURATION OR FRESH CUTS OF LIMBS OVER 1/2", WHICH HAVE NOT BEEN COMPLETELY CALLED, SHALL BE REJECTED.

PLANTS SHALL NOT BE BOUD WITH ROOTS OR ROPE AT ANY TIME SO AS TO DAMAGE THE BARK OR BREAK BRANCHES.

V. TREES AND SHRUBS SHALL BE MEASURED TO THE AVERAGE HEIGHT OR SPREAD OF THE SHRUB, AND NOT TO THE LONGEST BRANCH.

VI. TREES AND SHRUBS SHALL BE HANDLED WITH CARE BY THE ROOT BALL.

7.



LIGHTING NOTES:

THIS LIGHTING PLAN DEPICTS PROPOSED SUSTAINED ILLUMINATION LEVELS CALCULATED USING DATA PROVIDED BY THE NOTED MANUFACTURER(S). ACTUAL SUSTAINED SITE ILLUMINATION LEVELS AND PERFORMANCE OF LUMINAIRES MAY VARY DUE TO VARIATIONS IN WEATHER, ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS, THE SERVICE LIFE OF EQUIPMENT AND LUMINAIRES AND OTHER RELATED VARIABLE FIELD CONDITIONS.

THE LIGHT LOSS FACTORS USED IN THESE LIGHTING CALCULATIONS ARE 0.90 FOR ALL LED LUMINAIRES, 0.80 FOR ALL HIGH PRESSURE SODIUM LUMINAIRES OR 0.72 FOR ALL METAL HALIDE LUMINAIRES UNLESS OTHERWISE SPECIFIED. THESE FACTORS ARE INDICATIVE OF TYPICAL LIGHTING INDUSTRY MODELING STANDARDS.

THE LIGHTING VALUES AND CALCULATION POINTS DEPICTED ON THIS PLAN ARE ALL ANALYZED ON A HORIZONTAL GEOMETRIC PLANE AT ELEVATION ZERO (GROUND LEVEL) UNLESS OTHERWISE NOTED. THE VALUES DEPICTED ON THIS PLAN ARE IN FOOTCANDLES.

THE LUMINAIRES, LAMPS AND LENSES MUST BE REGULARLY INSPECTED/MAINTAINED TO ENSURE THAT THEY FUNCTION PROPERLY. THIS WORK SHOULD INCLUDE, BUT NOT BE LIMITED TO, FREQUENT VISUAL INSPECTIONS, CLEANING OF LENSES, AND RELAMPING (IF NECESSARY) AT LEAST ONCE EVERY SIX (6) MONTHS. FAILURE TO FOLLOW THE ABOVE STEPS COULD CAUSE THE LUMINAIRES, LAMPS AND LENSES TO FAIL PROPERLY TO FUNCTION.

WHERE APPLICABLE, THE EXISTING CONDITION LIGHT LEVELS ILLUSTRATED ARE REPRESENTATIVE OF AN APPROXIMATION UTILIZING LABORATORY DATA FOR SIMILAR FIXTURES, UNLESS ACTUAL FIELD MEASUREMENTS ARE TAKEN WITH A LIGHT METER AND ARE, CONSEQUENTLY, APPROXIMATIONS ONLY. DUE TO FACTORS SUCH AS FIXTURE MAINTENANCE, EQUIPMENT TOLERANCES, WEATHER CONDITIONS, ETC, ACTUAL LIGHT LEVELS MAY DIFFER. EXISTING LIGHT LEVELS DEPICTED ON THIS PLAN SHOULD BE CONSIDERED APPROXIMATE.

THIS LIGHTING PLAN IS INTENDED TO SHOW THE LOCATIONS AND TYPE OF LUMINAIRES, ONLY. POWER SYSTEM, CONDUITS, WIRING, VOLTAGES AND OTHER ELECTRICAL COMPONENTS ARE THE RESPONSIBILITY OF THE ARCHITECT, MEP AND/OR LIGHTING CONTRACTOR, AS INDICATED IN THE CONSTRUCTION CONTRACT DOCUMENTS. THESE ITEMS MUST BE INSTALLED AS REQUIRED BY STATE AND LOCAL REGULATIONS. LIGHT POLE BASES ARE THE RESPONSIBILITY OF THE STRUCTURAL ENGINEER, AS INDICATED IN THE CONSTRUCTION CONTRACT DOCUMENTS. CONTRACTOR IS RESPONSIBLE FOR INSTALLING LIGHTING FIXTURES AND APPURTENANCES IN ACCORDANCE WITH ALL APPLICABLE BUILDING AND ELECTRICAL CODES AND ALL OTHER APPLICABLE RULES, REGULATIONS, LAWS AND STATUTES.

CONTRACTOR MUST BRING TO DESIGNER'S ATTENTION, PRIOR TO THE COMMENCEMENT OF CONSTRUCTION, ANY LIGHT LOCATIONS THAT CONFLICT WITH DRAINAGE, UTILITIES, OR OTHER STRUCTURES.

IT IS LIGHTING CONTRACTOR'S RESPONSIBILITY TO COORDINATE WITH THE PROJECT ARCHITECT OR OWNER REGARDING THE POWER SOURCE(S) FROM WITHIN THE BUILDING, AND TIMING DEVICES NECESSARY TO MEET THE DESIGN INTENT.

THE LIGHTING CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE CONTRACTOR REQUIREMENTS INDICATED IN THE SITE PLAN, INCLUDING BUT NOT LIMITED TO, GENERAL NOTES, GRADING AND UTILITY NOTES, SITE SAFETY, AND ALL GOVERNMENTAL RULES, LAWS, ORDINANCES, REGULATIONS AND THE LIKE.

THE CONTRACTOR MUST VERIFY THAT INSTALLATION OF LIGHTING FIXTURES COMPLIES WITH THE REQUIREMENTS FOR SEPARATION FROM OVERHEAD ELECTRICAL WIRES PER STATE REGULATIONS.

WHEN A BANK ATM IS INCLUDED IN THE PLAN, THE LIGHTING DESIGN REPRESENTS BOHLER'S UNDERSTANDING AND INTERPRETATION OF THE REGULATORY LIGHTING LEVELS INTENDED BY PUBLISHED STANDARDS.

UPON OWNER'S ACCEPTANCE OF THE COMPLETED PROJECT, THE OWNER SHALL BE RESPONSIBLE FOR ALL MAINTENANCE, SERVICING, REPAIR AND INSPECTION OF THE LIGHTING SYSTEM AND ALL OF ITS COMPONENTS AND RELATED SYSTEMS, TO ENSURE ADEQUATE LIGHTING LEVELS ARE PRESENT AND FUNCTIONING AT ALL TIMES.

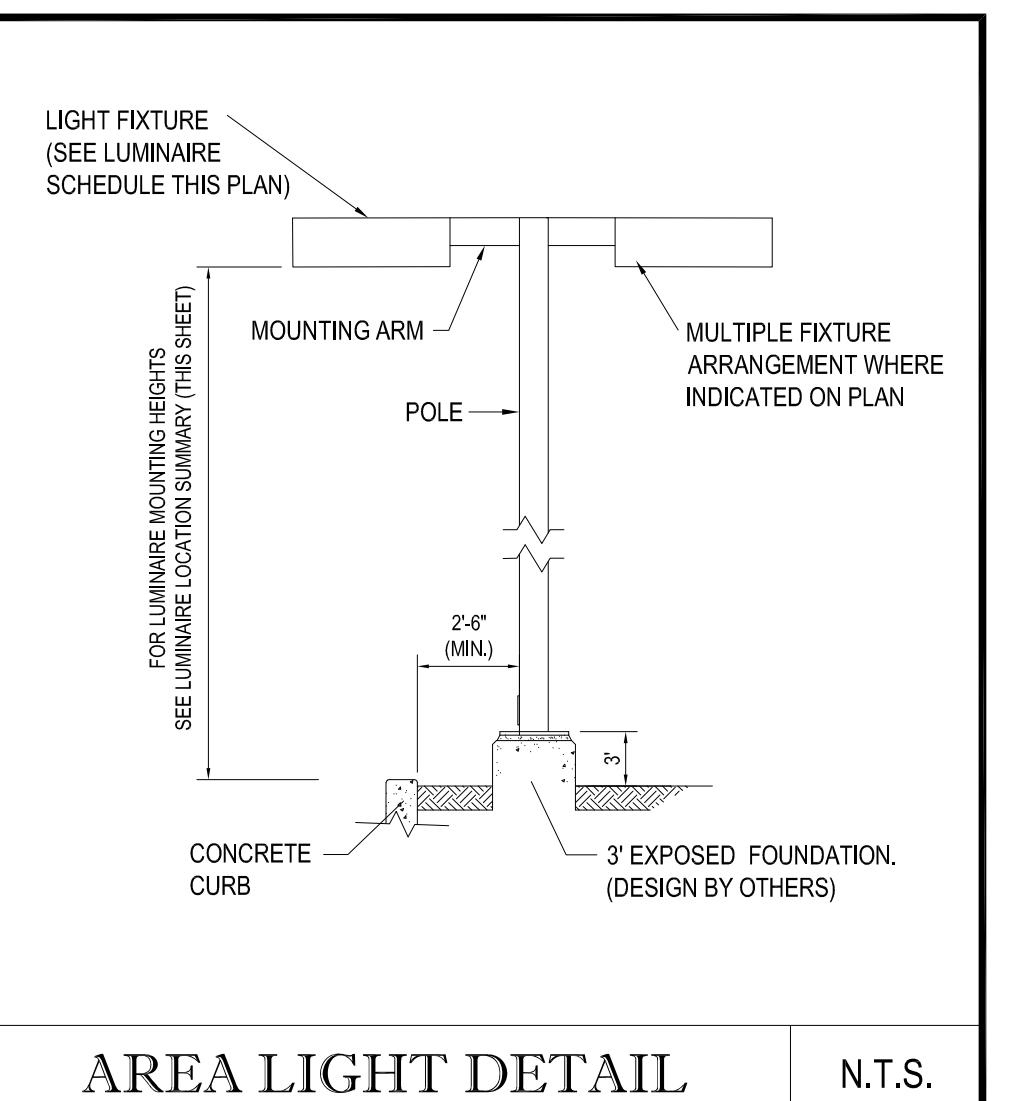
LIGHTING LEVELS INDICATED ON THIS PLAN ARE TAKEN FROM PLAN PREPARED BY SECURITY LIGHTING SYSTEMS, ENTITLED "POINT-BY-POINT FOOTCANDLE PLOT", DRAWING NUMBER 1PCP283891C AND DATED 1/28/15

NUMERIC SUMMARY							
	CALCTYPE	UNITS	AVG	MAX	MIN	AVG/MIN	MAX/MIN
SURFACE READINGS	ILLUMINANCE	FC	1.6	3.5	0.0	n/a	n/a
RTY LINE READINGS	ILLUMINANCE	FC	0.1	0.5	0.0	n/a	n/a

LUMINAIRE SCHEDULE					
MBOL	QTY	ARRANGEMENT	LUMENS	LLF	DESCRIPTION
□	9	(9) SINGLE	110,000	0.67	VP-S-48NB-110-5K-T4-UNV-RA--*-BLC SSP-4118-GL--*-TT (4") POLE TYPE*. MOUNTING HEIGHT 21'

JECT WIND LOAD CRITERIA BASED ON: ASCE 7-10 WIND SPEEDS (3-SEC PEAK GUST MPH) 50 MEAN RECURRENCE INTERVAL. FOR AREAS WHERE THE WIND LOAD CRITERIA EXCEEDS THIS LOAD, PLEASE CONSULT FACTORY FOR PROPER POLE SPECIFICATION AND MODEL NUMBER.

Specify color



AREA LIGHT DETAIL

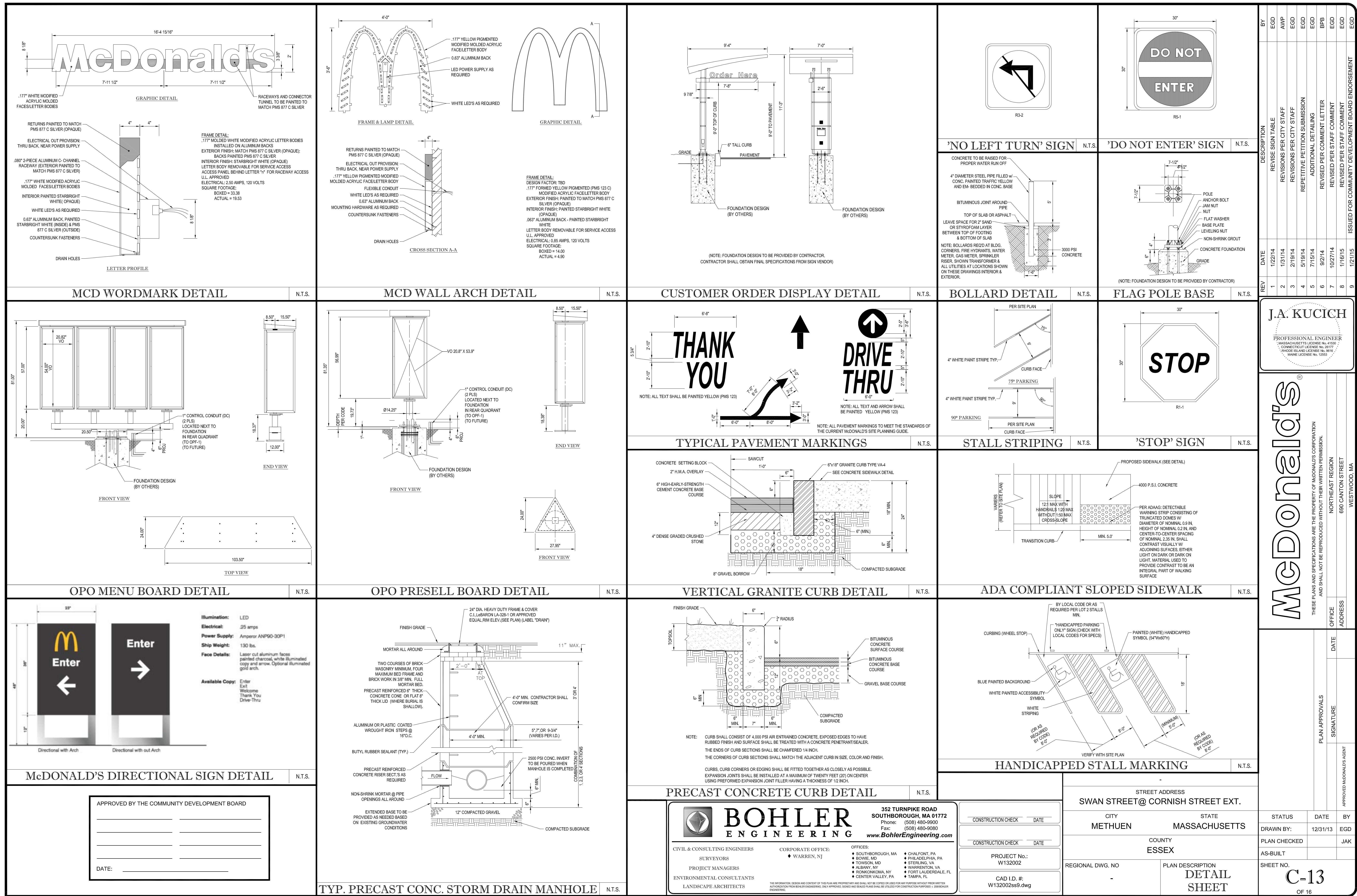
THIS PLAN TO BE UTILIZED FOR LIGHTING PURPOSES ONLY

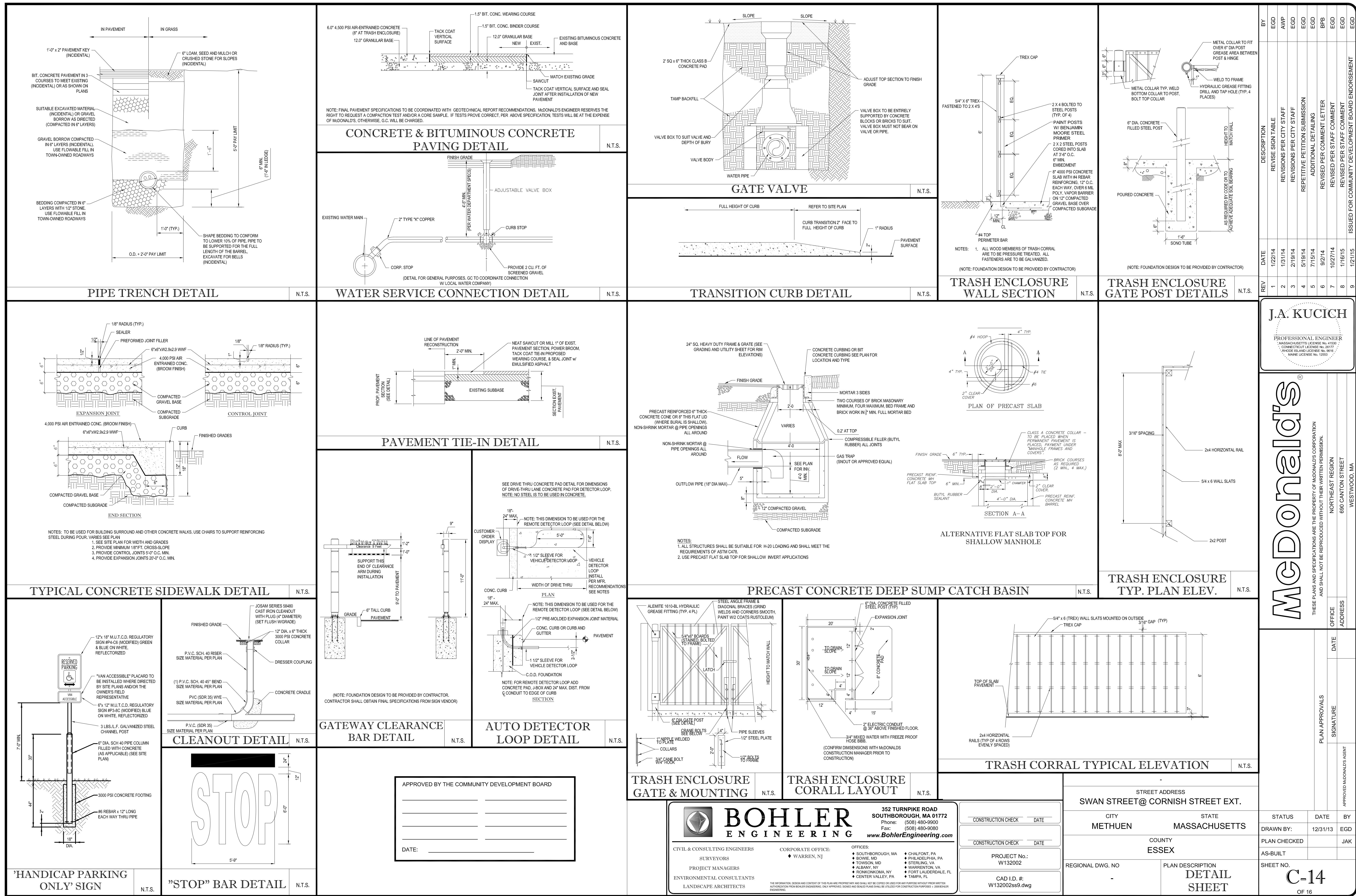


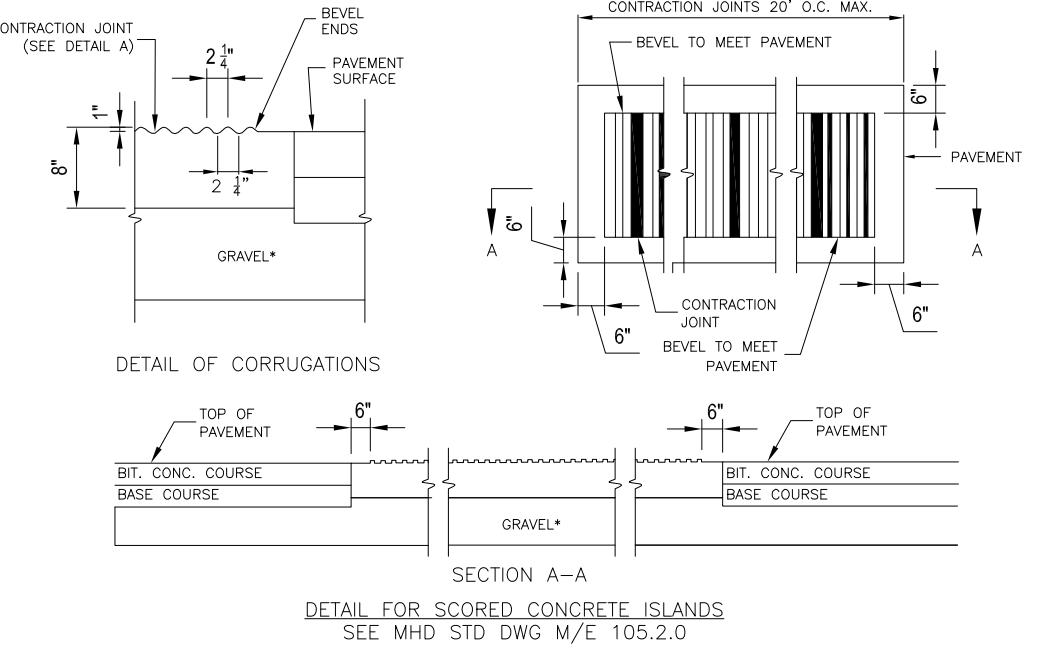
CONSTRUCTION CHECK	DATE	STREET ADDRESS SWAN STREET@ CORNISH STREET EXT.			APPROV	
CONSTRUCTION CHECK	DATE	CITY METHUEN	STATE MASSACHUSETTS	STATUS	DATE	BY
CONSTRUCTION CHECK	DATE	COUNTY ESSEX		DRAWN BY:	12/31/13	EGD
PROJECT No.:	W132002	REGIONAL DWG. NO	PLAN DESCRIPTION LIGHTING PLAN	PLAN CHECKED	JAK	
CAD I.D. #:	W132002ss9.dwg	-		AS-BUILT		
			SHEET NO.	C-12		



**Know what's below.
Call before you dig.**

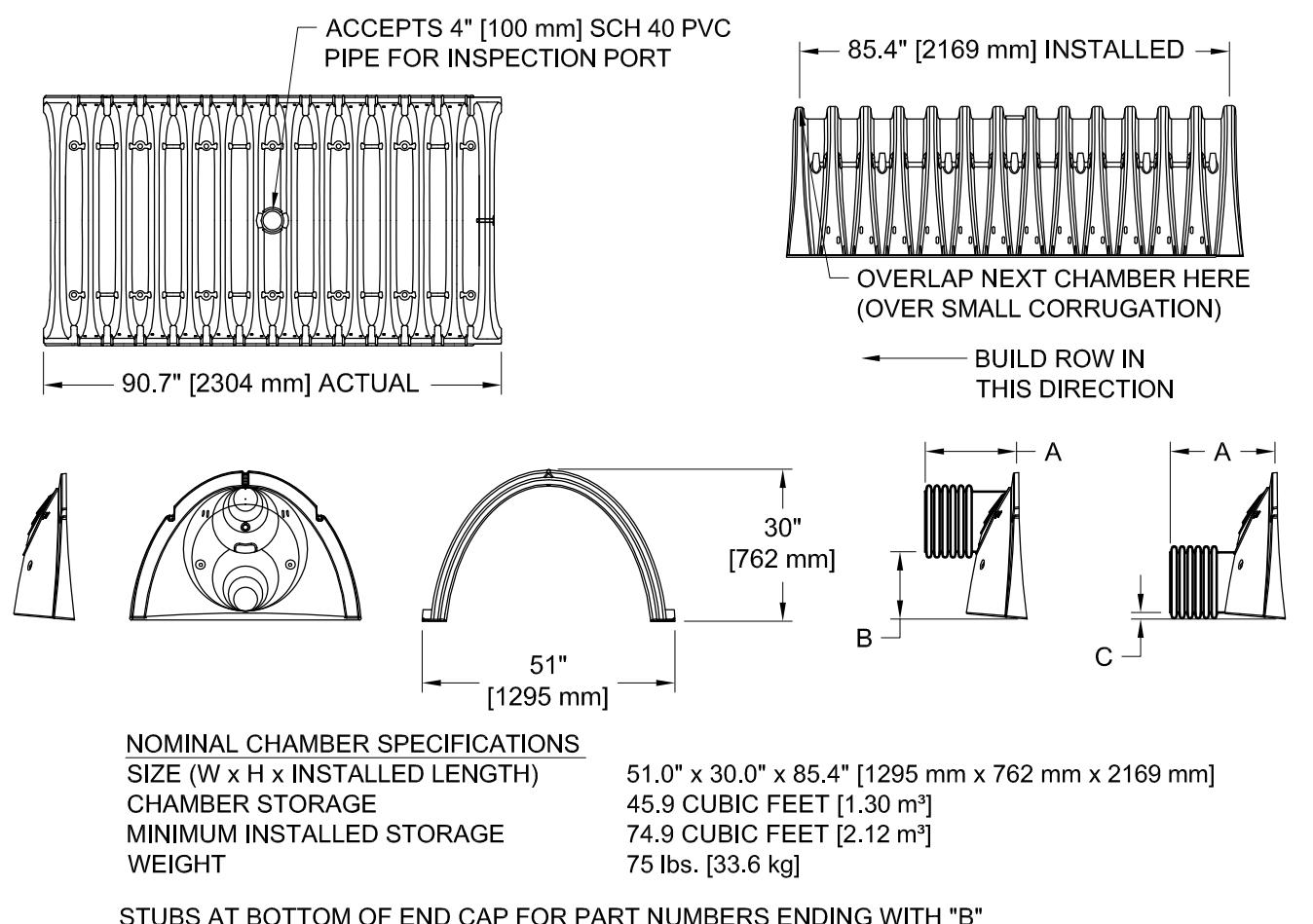




 <p>CONCRETE TO BE RAISED FOR PROPER WATER RUN OFF</p> <p>SECTION A-A</p> <p>DETAIL FOR SCORED CONCRETE ISLANDS SEE MHD STD DWG M/E 105.2</p>	<p>Hydro Conduit STC 900 Precast Concrete Stormceptor (600 US gallon Capacity)</p> <p>DR. BY: N. BALDWIN ICK. BY: DATE: FEB. 13, 2001 SCALE: N.T.S. DWG. #</p> <p>CONTRACTION JOINT (SEE DETAIL A) CONTRACTION JOINTS 20° O.C. MAX. BEVEL ENDS OF PAVEMENT SURFACE GRAVEL CONTRACTION JOINTS 20° O.C. MAX. BEVEL TO MEET PAVEMENT CONTRACTION JOINT BEVEL TO MEET PAVEMENT TOP OF PAVEMENT BIT. CONC. COURSE BASE COURSE GRAVEL TOP OF PAVEMENT SECTION A-A</p> <p>DETAIL OF CORRUGATIONS CONTRACTOR TO PROVIDE CRANE TO SET THE UNIT (HEAVIEST SECTION WEIGHS 9.5 TONS).</p> <p>NOTE : 1. CONTRACTION JOINTS ARE TO BE SPACED AT A MAXIMUM OF 20' APART. 2. THE JOINTS ARE TO BE BEVELED AND LOCATED IN THE DIRECTION OF THE CORRUGATIONS. SEE DETAIL OF CORRUGATIONS FOR DIRECTIONS. 3. THE CONTRACTOR DUTIES TO BE BEVELED. 4. DESCRIPTION OF MATERIAL AND CONSTRUCTION TO BE IN ACCORDANCE WITH SPECIFICATIONS AND SPECIAL PROVISIONS. 5. DOWNSPOUTS ARE TO BE SPACED AT 5,000 psi-0.75-705 lb/Cu.yd.</p> <p>THE DEPTH OF THE GRAVEL IS TO BE SUCH THAT ITS BOTTOM MEETS THE BOTTOM OF THE GRAVEL LIKE OF THE CONTIGUOUS PAVEMENT.</p> <p>NOTE : 1. THE USE OF FLEXIBLE CONNECTIONS IS RECOMMENDED AT THE INLET AND OUTLET WHERE APPLICABLE. 2. THE COVER SHOULD BE ATTACHED OVER THE 24" OUTLET RISER PIPE AND THE 6" OIL PORT. 3. THE STORMCEPTOR SYSTEM IS PROTECTED BY ONE OR MORE OF THE FOLLOWING U.S. PATENTS: #4985148, #5725760, #575115, #5649181, #608765, AND #6371615. 4. CONTRACTOR TO PROVIDE CRANE TO SET THE UNIT (HEAVIEST SECTION WEIGHS 9.5 TONS).</p> <p>ENLARGED INLET TEE DROP PIPE</p>	<p>Hydro Conduit STC 900 Precast Concrete Stormceptor (600 US gallon Capacity)</p> <p>DR. BY: N. BALDWIN ICK. BY: DATE: FEB. 13, 2001 SCALE: N.T.S. DWG. #</p> <p>CONTRACTION JOINTS 20° O.C. MAX. BEVEL TO MEET PAVEMENT CONTRACTION JOINT BEVEL TO MEET PAVEMENT TOP OF PAVEMENT BIT. CONC. COURSE BASE COURSE GRAVEL TOP OF PAVEMENT SECTION A-A</p> <p>DETAIL OF CORRUGATIONS CONTRACTOR TO PROVIDE CRANE TO SET THE UNIT (HEAVIEST SECTION WEIGHS 9.5 TONS).</p> <p>NOTE : 1. CONTRACTION JOINTS ARE TO BE SPACED AT A MAXIMUM OF 20' APART. 2. THE JOINTS ARE TO BE BEVELED AND LOCATED IN THE DIRECTION OF THE CORRUGATIONS. SEE DETAIL OF CORRUGATIONS FOR DIRECTIONS. 3. THE CONTRACTOR DUTIES TO BE BEVELED. 4. DESCRIPTION OF MATERIAL AND CONSTRUCTION TO BE IN ACCORDANCE WITH SPECIFICATIONS AND SPECIAL PROVISIONS. 5. DOWNSPOUTS ARE TO BE SPACED AT 5,000 psi-0.75-705 lb/Cu.yd.</p> <p>THE DEPTH OF THE GRAVEL IS TO BE SUCH THAT ITS BOTTOM MEETS THE BOTTOM OF THE GRAVEL LIKE OF THE CONTIGUOUS PAVEMENT.</p> <p>NOTE : 1. THE USE OF FLEXIBLE CONNECTIONS IS RECOMMENDED AT THE INLET AND OUTLET WHERE APPLICABLE. 2. THE COVER SHOULD BE ATTACHED OVER THE 24" OUTLET RISER PIPE AND THE 6" OIL PORT. 3. THE STORMCEPTOR SYSTEM IS PROTECTED BY ONE OR MORE OF THE FOLLOWING U.S. PATENTS: #4985148, #5725760, #575115, #5649181, #608765, AND #6371615. 4. CONTRACTOR TO PROVIDE CRANE TO SET THE UNIT (HEAVIEST SECTION WEIGHS 9.5 TONS).</p> <p>ENLARGED INLET TEE DROP PIPE</p>	<p>Hydro Conduit STC 900 Precast Concrete Stormceptor (600 US gallon Capacity)</p> <p>DR. BY: N. BALDWIN ICK. BY: DATE: FEB. 13, 2001 SCALE: N.T.S. DWG. #</p> <p>CONTRACTION JOINT (SEE DETAIL A) CONTRACTION JOINTS 20° O.C. MAX. BEVEL ENDS OF PAVEMENT SURFACE GRAVEL CONTRACTION JOINTS 20° O.C. MAX. BEVEL TO MEET PAVEMENT CONTRACTION JOINT BEVEL TO MEET PAVEMENT TOP OF PAVEMENT BIT. CONC. COURSE BASE COURSE GRAVEL TOP OF PAVEMENT SECTION A-A</p> <p>DETAIL OF CORRUGATIONS CONTRACTOR TO PROVIDE CRANE TO SET THE UNIT (HEAVIEST SECTION WEIGHS 9.5 TONS).</p> <p>NOTE : 1. CONTRACTION JOINTS ARE TO BE SPACED AT A MAXIMUM OF 20' APART. 2. THE JOINTS ARE TO BE BEVELED AND LOCATED IN THE DIRECTION OF THE CORRUGATIONS. SEE DETAIL OF CORRUGATIONS FOR DIRECTIONS. 3. THE CONTRACTOR DUTIES TO BE BEVELED. 4. DESCRIPTION OF MATERIAL AND CONSTRUCTION TO BE IN ACCORDANCE WITH SPECIFICATIONS AND SPECIAL PROVISIONS. 5. DOWNSPOUTS ARE TO BE SPACED AT 5,000 psi-0.75-705 lb/Cu.yd.</p> <p>THE DEPTH OF THE GRAVEL IS TO BE SUCH THAT ITS BOTTOM MEETS THE BOTTOM OF THE GRAVEL LIKE OF THE CONTIGUOUS PAVEMENT.</p> <p>NOTE : 1. THE USE OF FLEXIBLE CONNECTIONS IS RECOMMENDED AT THE INLET AND OUTLET WHERE APPLICABLE. 2. THE COVER SHOULD BE ATTACHED OVER THE 24" OUTLET RISER PIPE AND THE 6" OIL PORT. 3. THE STORMCEPTOR SYSTEM IS PROTECTED BY ONE OR MORE OF THE FOLLOWING U.S. PATENTS: #4985148, #5725760, #575115, #5649181, #608765, AND #6371615. 4. CONTRACTOR TO PROVIDE CRANE TO SET THE UNIT (HEAVIEST SECTION WEIGHS 9.5 TONS).</p> <p>ENLARGED INLET TEE DROP PIPE</p>
<p>SCORED CONCRETE</p> <p>N.T.S.</p>	<p>STORMWATER QUALITY UNIT</p> <p>N.T.S.</p>	<p>PRECAST GREASE TRAP 2,000 GAL./H.D.</p> <p>N.T.S.</p>	<p>TYP. PRECAST CONCRETE SANITARY MANHOLE</p> <p>N.T.S.</p>
<p>WATER MAIN CROSSINGS</p> <p>N.T.S.</p>	<p>CROSSWALK DETAIL</p> <p>N.T.S.</p>	<p>DRIVE-THRU</p> <p>SCALE: 1"=10'</p> <p>NOTE: THE PLACEMENT OF THE CO's SHOULD BE SUCH THAT IT PREVENTS OR MINIMIZES BLOCKING THE CUSTOMER'S VIEW OF THE MENU BOARD WHILE ORDERING.</p> <p>NOTE: LINEAR DIMENSIONS ARE MEASURED PERPENDICULAR TO THE BUILDING FACES SHOWN UNLESS OTHERWISE NOTED.</p> <p>NOTE: ALL HIGH BOLLARDS ARE TO BE 10'-24" FROM FACE OF CURB. THIS IS MEASURED FROM THE CLOSEST POINT ON THE SIGN.</p>	<p>McDonald's</p> <p>These plans and specifications are the property of McDonald's Corporation and shall not be reproduced without their written permission.</p> <p>North East Region 690 Canton Street Westwood, MA</p> <p>J.A. KUCICH PROFESSIONAL ENGINEER MASSACHUSETTS LICENSE No. 41530 CONTRACTOR LICENSE No. 177 RHODE ISLAND LICENSE No. 9616 MAINE LICENSE No. 12553</p>
<p>CONCRETE ENCASEMENT DETAIL</p> <p>N.T.S.</p>	<p>FRENCH DRAIN</p> <p>N.T.S.</p>	<p>APPROVED BY THE COMMUNITY DEVELOPMENT BOARD</p> <p>DATE: _____</p>	<p>STREET ADDRESS SWAN STREET@ CORNISH STREET EXT.</p> <p>CITY: METHUEN STATE: MASSACHUSETTS</p> <p>CONSTRUCTION CHECK DATE</p> <p>CONSTRUCTION CHECK DATE</p> <p>PROJECT No.: W132002</p> <p>CAD I.D. #: W132002ss9.dwg</p> <p>REGIONAL DWG. NO. PLAN DESCRIPTION</p> <p>DETAIL SHEET</p> <p>SHEET NO. C-15</p> <p>OF 16</p>



SC-740 TECHNICAL SPECIFICATIONS



STUBS AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B"

STUBS AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"

PART#	STUB	A	B	C
SC740EPE06T	6" [150 mm]	10.90" [277 mm]	18.50" [470 mm]	N/A
SC740EPE06B	6" [150 mm]	10.90" [277 mm]	N/A	0.50" [13 mm]
SC740EPE08T	8" [200 mm]	12.20" [310 mm]	16.50" [419 mm]	N/A
SC740EPE08B	8" [200 mm]	12.20" [310 mm]	N/A	0.60" [15 mm]
SC740EPE10T	10" [250 mm]	13.40" [340 mm]	14.50" [368 mm]	N/A
SC740EPE10B	10" [250 mm]	13.40" [340 mm]	N/A	0.70" [18 mm]
SC740EPE12T	12" [300 mm]	14.70" [373 mm]	12.50" [318 mm]	N/A
SC740EPE12B	12" [300 mm]	14.70" [373 mm]	N/A	1.20" [30 mm]
SC740EPE15T	15" [375 mm]	18.40" [467 mm]	9.00" [229 mm]	N/A
SC740EPE15B	15" [375 mm]	18.40" [467 mm]	N/A	1.30" [33 mm]
SC740EPE18T	18" [450 mm]	19.70" [500 mm]	5.00" [127 mm]	N/A
SC740EPE18B	18" [450 mm]	19.70" [500 mm]	N/A	1.60" [41 mm]
SC740EPE24B	24" [600 mm]	18.50" [470 mm]	N/A	0.10" [3 mm]

ALL STUBS, EXCEPT FOR THE SC740EPE24B ARE PLACED AT BOTTOM OF END CAP SUCH THAT THE OUTSIDE DIAMETER OF THE STUB IS FLUSH WITH THE BOTTOM OF THE END CAP. FOR ADDITIONAL INFORMATION CONTACT STORMTECH AT 1-888-892-2694.

*FOR THE SC740EPE24B THE 24" [600 mm] STUB LIES BELOW THE BOTTOM OF THE END CAP APPROXIMATELY 1.75" [44 mm]. BACKFILL MATERIAL SHOULD BE REMOVED FROM BELOW THE N-12 STUB SO THAT THE FITTING SITS LEVEL.

NOTE: ALL DIMENSIONS ARE NOMINAL

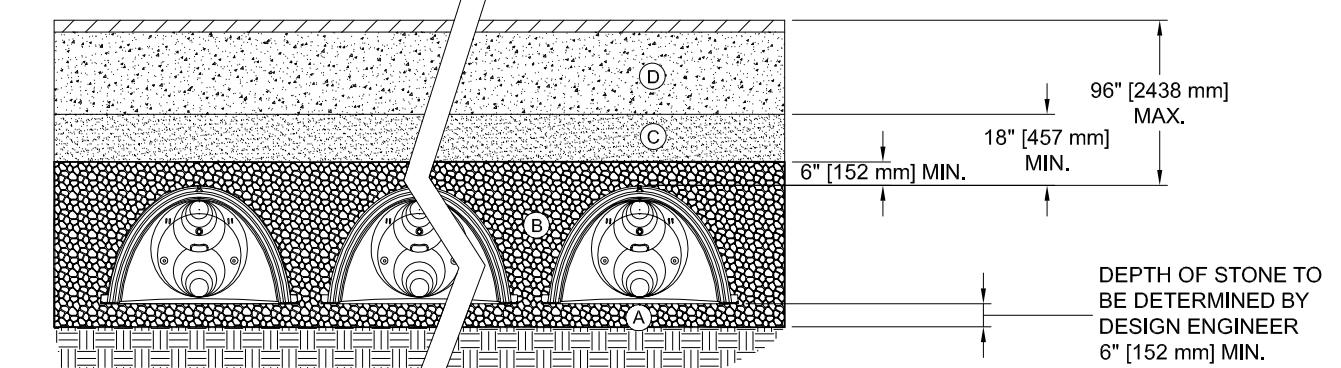
STORMTECH ACCEPTABLE FILL

ACCEPTABLE FILL MATERIALS: STORMTECH SC-740 AND SC-310 CHAMBER SYSTEMS

MATERIAL LOCATION	DESCRIPTION	AASHTO M43 DESIGNATION ⁽¹⁾	COMPACTION/DENSITY REQUIREMENT
(D) FILL MATERIAL FOR LAYER D STARTS FROM THE TOP OF THE C LAYER TO THE BOTTOM OF THE PAVEMENT. NOTE THAT PAVEMENT FINISH GRADE ABOVE. NOTE THAT PAVEMENT SUB-BASE MAY BE PART OF THIS LAYER.	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
(C) FILL MATERIAL FOR LAYER C STARTS FROM THE TOP OF THE EMBANKMENT SYSTEM (OVER THE CAYER) TO THE BOTTOM OF THE CAYER. NOTE THAT PAVEMENT SUB-BASE MAY BE A PART OF THIS LAYER.	GRANULAR WELL GRADED SOIL/AGGREGATE MIXTURES, <32% FINE, <10% CLAY, <10% SAND. THE CHAMBERS IN N-12 STUBS, 0.50" [12.7 mm] DIA. LAYERS IN 6" [152 mm] LIFTS. TO A MIN. 95% STANDARD PROCTOR DENSITY (i.e., ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 lbs [53 kN]. DYNAMIC FORCE NOT TO EXCEED 20,000 lbs [89 kN].)	3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTION AT 6" [152 mm] OF MATERIAL OVER THE CHAMBERS IN N-12 STUBS, 0.50" [12.7 mm] DIA. LAYERS IN 6" [152 mm] LIFTS. TO A MIN. 95% STANDARD PROCTOR DENSITY (i.e., ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 lbs [53 kN]. DYNAMIC FORCE NOT TO EXCEED 20,000 lbs [89 kN].)
(B) EMBANKMENT STONE SURROUNDING THE CHAMBER FROM THE C LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE. NOMINAL SIZE DISTRIBUTION BETWEEN 3/4" - 2 INCH [19 - 51 mm]	3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
(A) FOUNDATION STONE BELOW CHAMBERS FROM THE SURFACE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE. NOMINAL SIZE DISTRIBUTION BETWEEN 3/4" - 2 INCH [19 - 51 mm]	3, 35, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A 95% STANDARD PROCTOR DENSITY.

PLEASE NOTE:
1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR, FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".

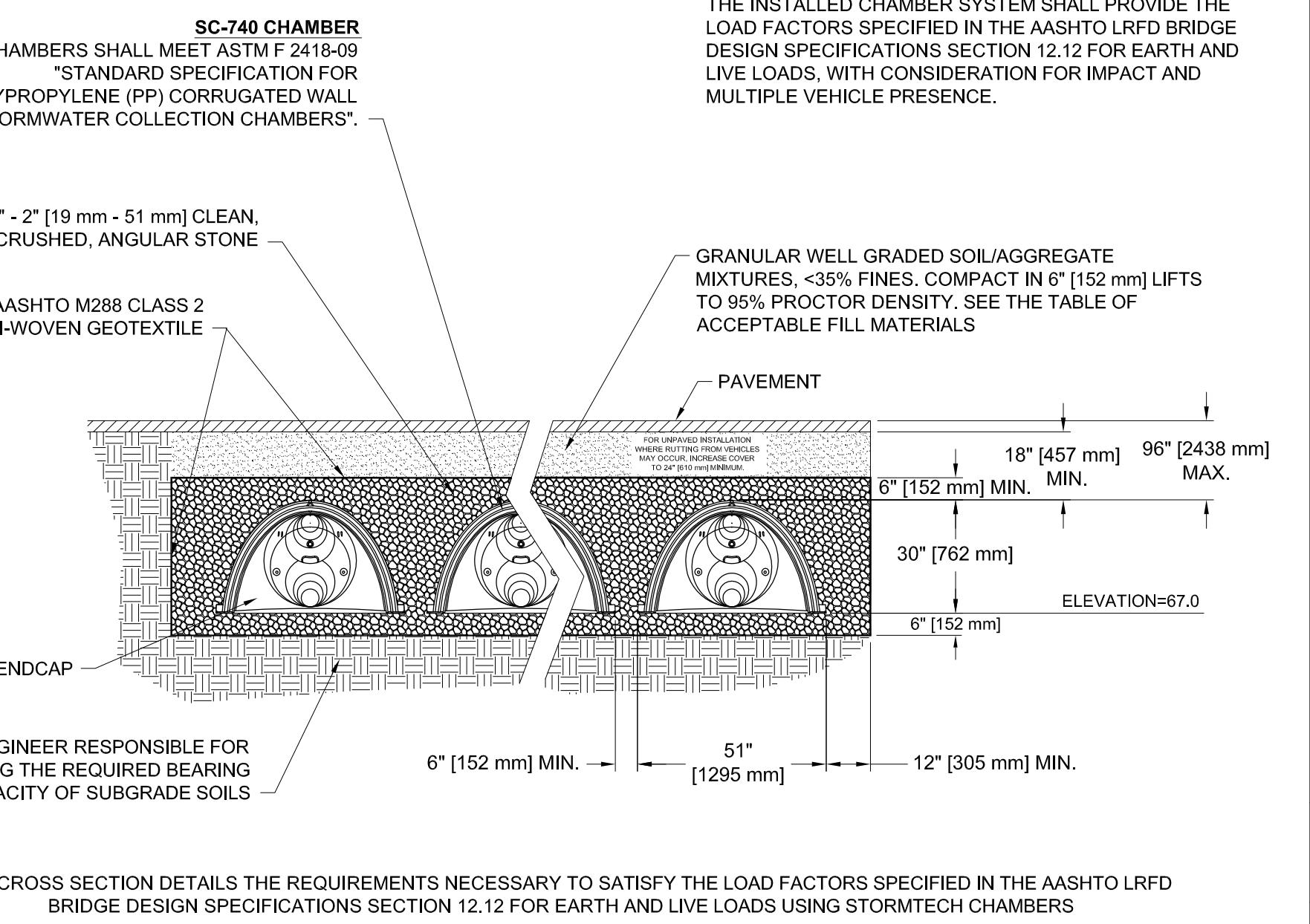
2. AS AN ALTERNATE TO PROCTOR TESTING AND FIELD DENSITY MEASUREMENTS ON OPEN GRADED STONE, STORMTECH COMPACTION REQUIREMENTS ARE MET FOR A LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6" [152 mm] LIFTS USING TWO FULL COVERS WITH AN APPROPRIATE COMPACTOR.



STORMTECH PRODUCT SPECIFICATIONS

1.0 GENERAL	1.1 STORMTECH CHAMBERS ARE DESIGNED TO CONTROL STORMWATER RUNOFF. AS A SUBSURFACE RETENTION SYSTEM, STORMTECH CHAMBERS RETAIN AND ALLOW EFFECTIVE INFILTRATION OF WATER INTO THE SOIL, AS A SUBSURFACE DETENTION SYSTEM, STORMTECH CHAMBERS DETAIN AND ALLOW FOR THE METERED FLOW OF WATER TO AN OUTFALL.
2.0 CHAMBER PARAMETERS	2.1 THE CHAMBER SHALL HAVE A CIRCULAR, INDED, FLAT SURFACE ON THE TOP OF THE CHAMBER FOR AN OPTIONAL 4-INCH [100 mm] INSPECTION PORT.
2.2 THE NOMINAL CHAMBER DIMENSIONS OF THE STORMTECH SC-740 SHALL BE 30.0 INCHES [762 mm] HIGH AND 90.7 INCHES [2304 mm] LONG. THE NOMINAL CHAMBER DIMENSIONS OF THE STORMTECH SC-310 SHALL BE 16.0 INCHES [406 mm] TALL, 34.0 INCHES [864 mm] WIDE AND 90.7 INCHES [2304 mm] LONG. THE INSTALLED LENGTH OF A JOINED CHAMBER SHALL BE 85.4 INCHES [2169 mm].	2.3 THE CHAMBER SHALL HAVE A CONTINUOUS CURVED SECTION PROFILE.
2.4 THE CHAMBER SHALL BE OPEN-BOTTOMED.	2.5 THE CHAMBER SHALL INCORPORATE AN OVERLAPPING CORRUGATION JOINT SYSTEM TO ALLOW CHAMBER ROWS OF ALMOST ANY LENGTH TO BE CREATED. THE OVERLAPPING CORRUGATION JOINT SYSTEM SHALL BE EFFECTIVE WHILE ALLOWING A CHAMBER TO BE TRIMMED TO SHORTEN ITS OVERALL LENGTH.
2.6 THE NOMINAL STORAGE VOLUME OF A JOINED STORMTECH SC-740 CHAMBER SHALL BE 30 CUBIC FEET. THE VOLUME OF A CHAMBER INSTALLED PER STORMTECH'S TYPICAL DETAILS INCLUDES THE VOLUME OF CRUSHED ANGULAR STONE WITH AN ASSUMED 40% POROSITY). THIS EQUALS TO 2.2,000 FEET OF STORAGE/SQUARE FOOT (0.4 m³ OF STORAGE/SQUARE METER) OF BED. THE NOMINAL STORAGE VOLUME OF AN INSTALLED STORMTECH SC-310 CHAMBER SHALL BE 3.0 CUBIC FEET [0.89 m³] PER CHAMBER WHEN INSTALLED PER STORMTECH'S TYPICAL DETAILS INCLUDES THE VOLUME OF CRUSHED ANGULAR STONE WITH AN ASSUMED 40% POROSITY). THIS EQUALS TO 1.3 CUBIC FEET OF STORAGE/SQUARE FOOT [0.4 m³ OF STORAGE/SQUARE METER] OF BED.	2.7 THE CHAMBER SHALL HAVE FORTY-EIGHT ORIFICES PENETRATING THE SIDEWALLS TO ALLOW FOR LATERAL CONVEYANCE OF WATER.

SC-740 TYPICAL CROSS-SECTION

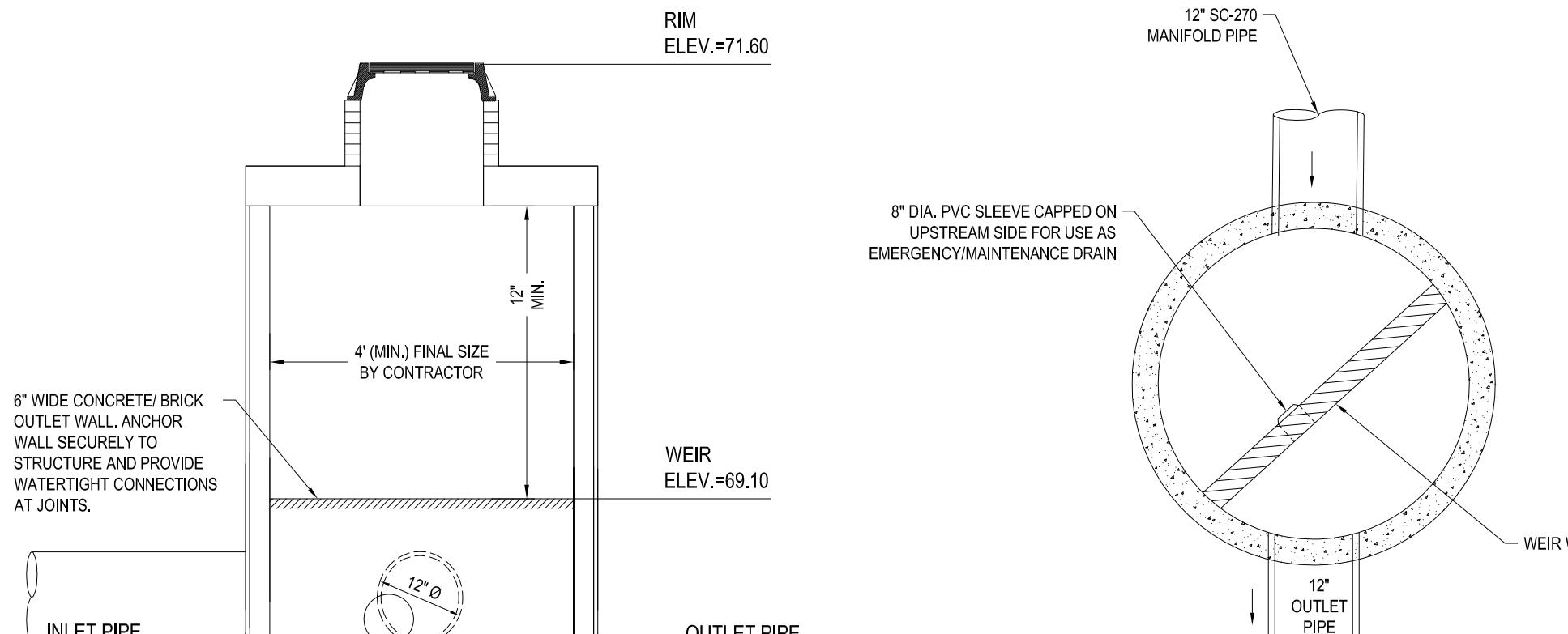


STORMWATER CHAMBER SPECIFICATIONS

1. CHAMBERS SHALL BE STORMTECH SC-740, SC-310 OR APPROVED EQUAL.
2. CHAMBERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F2418-09, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
3. CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORT PANELS.
4. THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12 ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCE.
5. ONLY CHAMBERS THAT ARE APPROVED BY THE ENGINEER WILL BE ALLOWED. THE CONTRACTOR SHALL SUBMIT (3 SETS) OF THE FOLLOWING TO THE ENGINEER FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE:
 - a. A STRUCTURAL EVALUATION BY A REGISTERED STRUCTURAL ENGINEER THAT DEMONSTRATES THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12 ARE MET. THE 50-YEAR CREEP MODULUS DATA SPECIFIED IN ASTM F2418-05 MUST BE USED AS A PART OF THE AASHTO STRUCTURAL EVALUATION TO VERIFY LONG-TERM PERFORMANCE.
6. CHAMBERS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.
7. ALL DESIGN SPECIFICATIONS FOR CHAMBERS SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S LATEST DESIGN MANUAL.
8. THE INSTALLATION OF CHAMBERS SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S LATEST INSTALLATION INSTRUCTIONS.

STORMTECH GENERAL NOTES

1. STORMTECH REQUIRES INSTALLING CONTRACTORS TO USE AND UNDERSTAND STORMTECH'S LATEST INSTALLATION INSTRUCTIONS PRIOR TO BEGINNING SYSTEM INSTALLATION.
2. OUR TECHNICAL SERVICES DEPARTMENT OFFERS INSTALLATION CONSULTATIONS TO INSTALLING CONTRACTORS. CONTACT OUR TECHNICAL SERVICES REPRESENTATIVE AT LEAST 30 DAYS PRIOR TO SYSTEM INSTALLATION TO ARRANGE A PRE-INSTALLATION CONSULTATION. OUR REPRESENTATIVES CAN ALSO ANSWER QUESTIONS ON STORMTECH'S SYSTEMS. THE STORMTECH CHAMBER SYSTEM AND FORM THE INSTALLING CONTRACTOR OF THE MINIMUM INSTALLATION REQUIREMENTS BEFORE BEGINNING THE SYSTEM'S CONSTRUCTION. CALL 1-888-892-2694 TO SPEAK TO A TECHNICAL SERVICES REPRESENTATIVE OR VISIT WWW.STORMTECH.COM TO RECEIVE A COPY OF OUR INSTALLATION INSTRUCTIONS.
3. STORMTECH'S REQUIREMENTS FOR SYSTEMS WITH PAVEMENT DESIGN (ASPHALT, CONCRETE PAVERS, ETC.): MINIMUM COVER IS 18" [457 mm] NOT INCLUDING PAVEMENT. MAXIMUM COVER IS 96" [2438 mm] INCLUDING PAVEMENT. FOR INSTALLATIONS THAT DO NOT INCLUDE PAVEMENT, WHERE RUTTING FROM VEHICLES MAY OCCUR, MINIMUM REQUIRED COVER IS 24" [610 mm]. MAXIMUM COVER IS 96" [2438 m].
4. THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE DESIGN ENGINEER.
5. AASHTO M288 CLASS 2 NON-WOVEN GEOTEXTILE (FILTER FABRIC) MUST BE USED AS INDICATED IN THE PROJECT PLANS.
6. STONE PLACEMENT BETWEEN CHAMBERS ROWS AND AROUND PERIMETER MUST FOLLOW INSTRUCTIONS AS INDICATED IN THE MOST CURRENT VERSION OF STORMTECH'S INSTALLATION INSTRUCTIONS.
7. BACKFILLING OVER THE CHAMBERS MUST FOLLOW REQUIREMENTS AS INDICATED IN THE MOST CURRENT VERSION OF STORMTECH'S INSTALLATION INSTRUCTIONS.
8. THE CONTRACTOR MUST REFER TO STORMTECH'S INSTALLATION INSTRUCTIONS FOR A TABLE OF ACCEPTABLE VEHICLE LOADS AT VARIOUS DEPTHS OF COVER. THIS INFORMATION IS ALSO AVAILABLE AT STORMTECH'S WEBSITE: WWW.STORMTECH.COM. THE CONTRACTOR IS RESPONSIBLE FOR PREVENTING VEHICLES THAT EXCEED STORMTECH'S REQUIREMENTS FROM TRAVELING ACROSS OR PARKING OVER THE STORMWATER SYSTEM. TEMPORARY FENCING, WARNING TAPE AND APPROPRIATELY LOCATED SIGNS ARE COMMONLY USED TO PREVENT UNAUTHORIZED VEHICLES FROM ENTERING SENSITIVE CONSTRUCTION AREAS.
9. THE CONTRACTOR MUST APPLY EROSION AND SEDIMENT CONTROL MEASURES TO PROTECT THE STORMWATER SYSTEM DURING ALL PHASES OF SITE CONSTRUCTION PER LOCAL CODES AND DESIGN ENGINEER'S SPECIFICATIONS.
10. STORMTECH PRODUCT WARRANTY IS LIMITED. SEE CURRENT PRODUCT WARRANTY FOR DETAILS. TO ACQUIRE A COPY CALL STORMTECH AT 1-888-892-2694 OR VISIT WWW.STORMTECH.COM



OUTLET CONTROL STRUCTURE

N.T.S.

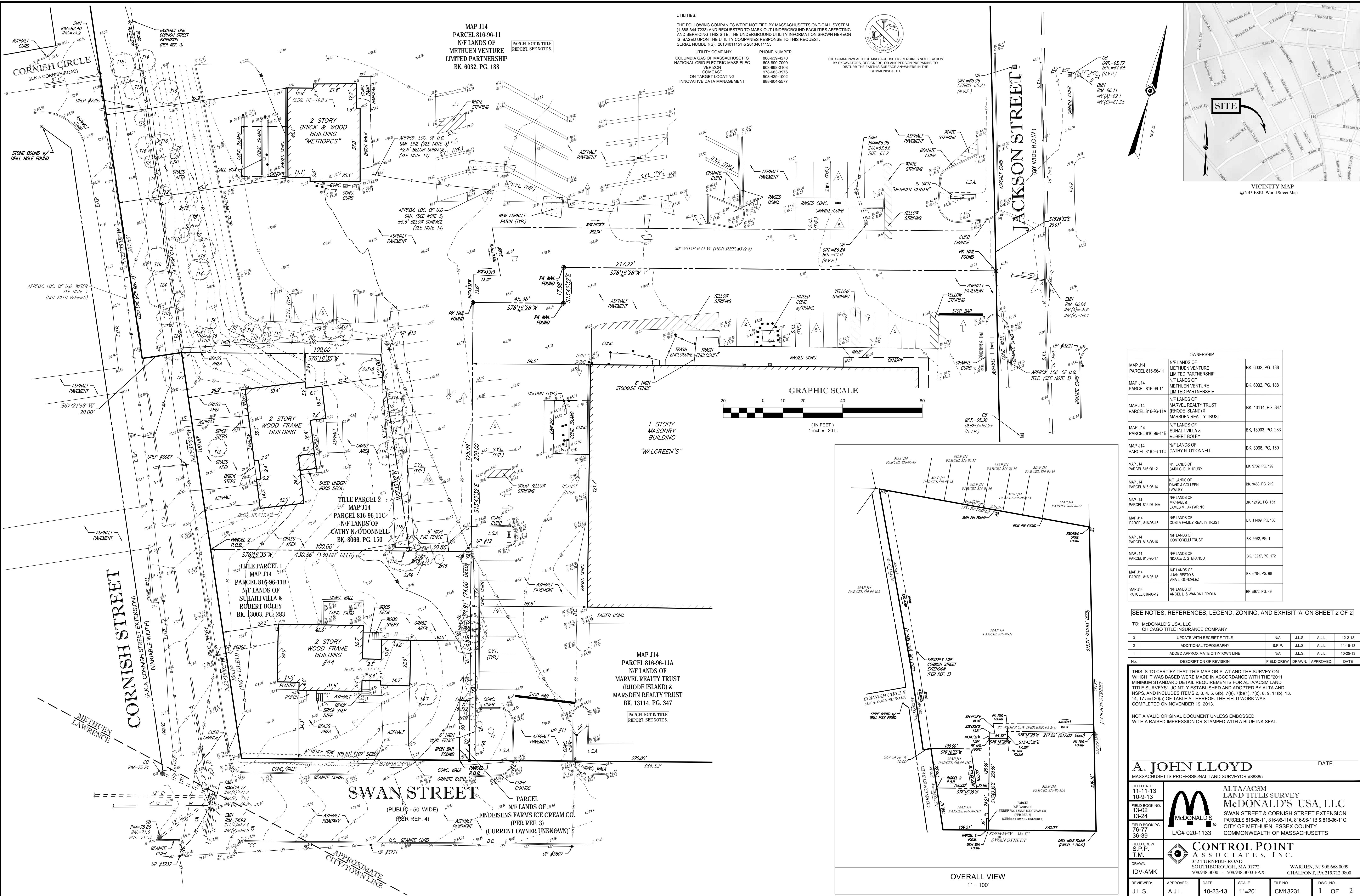
STREET ADDRESS	SWAN STREET@ CORNISH STREET EXT.		
CITY	METHUEN	STATE	MASSACHUSETTS
COUNTY	ESSEX		
REGIONAL DWG. NO.	-	PLAN DESCRIPTION	DETAIL SHEET
APPROVED MCDONALD'S AGENT	SIGNATURE	DATE	DATE
APPROVED BY THE COMMUNITY DEVELOPMENT BOARD	DATE:	DATE:	DATE:

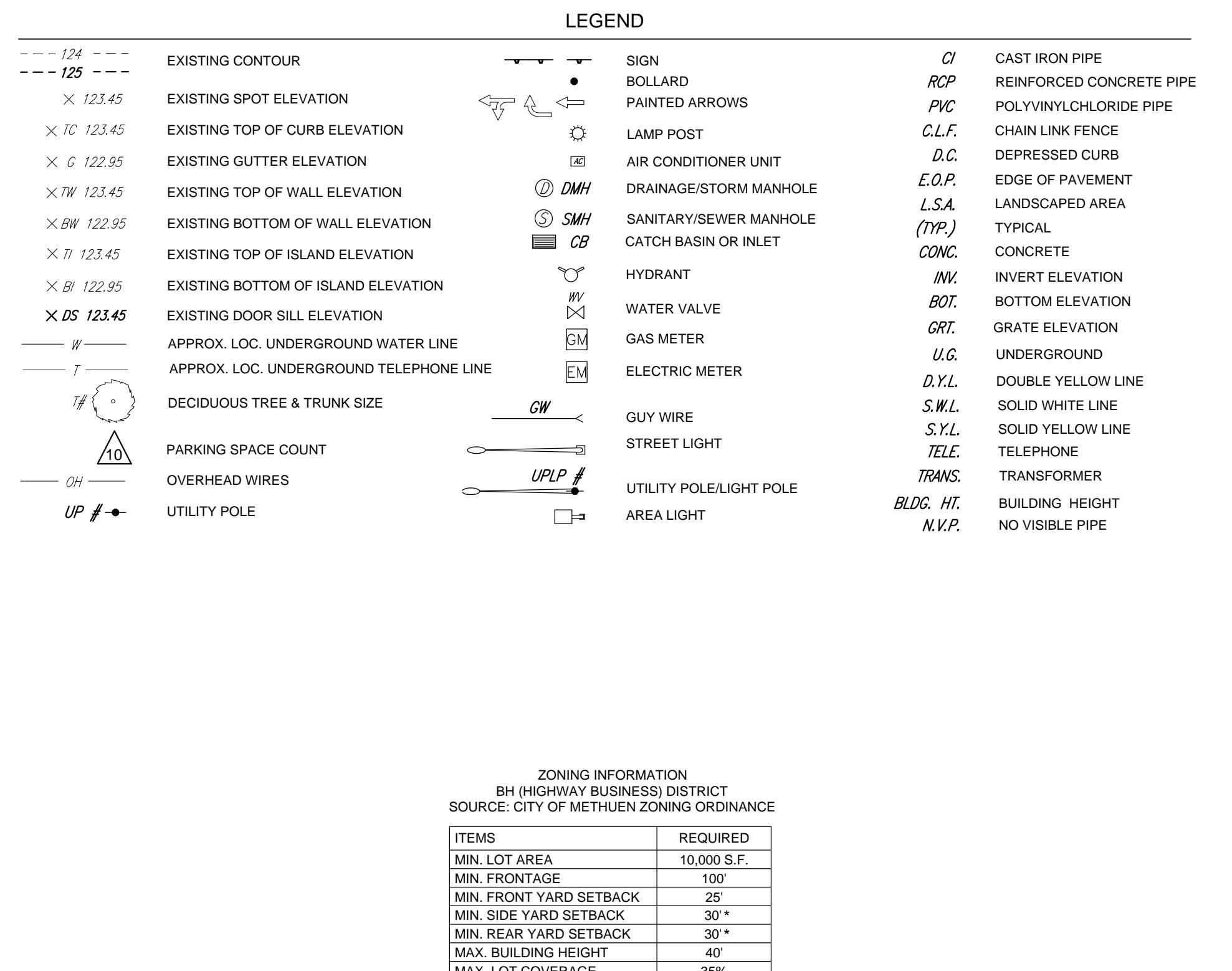
C-16
OF 16

REV	DATE	REVISION	DESCRIPTION
1	1/22/14	1	REVISE SIGN TABLE
2	1/31/14	2	REVISES PER CITY STAFF
3	2/19/14	3	REVISE PETITION SUBMISSION
4	5/19/14	4	ADDITIONAL DETAILING
5	9/2/14	5	REVISED PER COMMENT LETTER
6	10/2/14	6	REVISED PER STAFF COMMENT
7	11/6/15	7	REVISED FOR COMMUNITY DEVELOPMENT BOARD ENDORSEMENT
8	1/12/15	8	REVISED FOR COMMUNITY DEVELOPMENT BOARD ENDORSEMENT
9	1/12/15	9	REVISED FOR COMMUNITY DEVELOPMENT BOARD ENDORSEMENT

J.A. KUCICH
PROFESSIONAL ENGINEER
MASSACHUSETTS LICENSE NO. 41530
CONCORD, MASSACHUSETTS 01742
RHODE ISLAND LICENSE NO. 9616
MAINE LICENSE NO. 12033

McDonald's
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NORTH EAST REGION
690 CANTON STREET
WESTWOOD, MA





ZONING INFORMATION
BH (HIGHWAY BUSINESS) DISTRICT
SOURCE: CITY OF METHUEN ZONING ORDINANCE

ITEMS	REQUIRED
MIN. LOT AREA	10,000 S.F.
MIN. FRONTAGE	100'
MIN. FRONT YARD SETBACK	25'
MIN. SIDE YARD SETBACK	30*
MIN. REAR YARD SETBACK	30*
MAX. BUILDING HEIGHT	40'
MAX. LOT COVERAGE	35%

*SEE ZONING FOR ADDITIONAL REQUIREMENTS.

NOTE: ZONING CRITERIA IDENTIFIED HEREON ARE BASED UPON PRELIMINARY INVESTIGATION AND PRESENTED FOR REFERENCE ONLY. SAME MUST BE CONFIRMED WITH LOCAL ZONING OFFICIAL AND LEGAL COUNSEL TO CONFIRM VALIDITY.

NOTES:

- PROPERTY KNOWN AS PARCELS 816-96-11, 816-96-11A, 816-96-11B & 816-96-11C AS SHOWN ON THE ASSESSOR'S MAPS OF THE CITY OF METHUEN, ESSEX COUNTY, COMMONWEALTH OF MASSACHUSETTS, MAPS #J14 & J15.
- AREA OF LOT 1 = 276,988 SQUARE FEET OR 6.403 ACRES
AREA OF LOT 1A = 1,223 SQUARE FEET OR 0.027 ACRES
AREA OF LOT 1B = 12,721 SQUARE FEET OR 0.292 ACRES
AREA OF LOT 1C = 9,881 SQUARE FEET OR 0.227 ACRES
AREA OF UNKNOWN OWNERSHIP = 150 SQUARE FEET OR 0.003 ACRES
TOTAL AREA = 366,850 SQUARE FEET OR 8.422 ACRES
- THIS PLAN IS BASED ON INFORMATION PROVIDED BY A SURVEY PREPARED IN THE FIELD BY CONTROL POINT ASSOCIATES, INC. AND OTHER REFERENCE MATERIAL AS LISTED HEREON.
- THIS SURVEY IS PREPARED WITH REFERENCE TO A TITLE REPORT FOR PARCELS 816-96-11B & 816-96-11C PREPARED BY CHICAGO TITLE INSURANCE COMPANY, MIMOG NO. 13-48135, CTIC ORDER NO. 71301323, WITH AN EFFECTIVE DATE OF OCTOBER 17, 2013. WHERE NO SURVEY RELATED EXCEPTIONS APPEAR IN SCHEDULE B, SECTION II.
- FOR PARCELS 816-96-11 & 816-96-11A THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT AND IS SUBJECT TO THE RESTRICTIONS, COVENANTS AND/OR EASEMENTS THAT MAY BE CONTAINED THEREIN.
- BY GRAPHIC PLOTTING ONLY PROPERTY IS LOCATED IN FLOOD HAZARD ZONE X (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN) PER REF. #2.
- THE EXISTENCE OF UNDERGROUND STORAGE TANKS, IF ANY, WAS NOT KNOWN AT THE TIME OF THE FIELD SURVEY.
- ELEVATIONS ARE BASED UPON NAVD 1988 PER GPS OBSERVATIONS UTILIZING THE KEYSTONE KEYNET VRS NETWORK.
- THE OFFSETS SHOWN ARE NOT TO BE USED FOR THE CONSTRUCTION OF ANY STRUCTURE, FENCE, PERMANENT ADDITION, ETC.
- PER CONTRACTUAL AGREEMENT WITH THE CLIENT, IMPROVEMENTS ON THE REMAINDER OF THE PARCEL BEYOND THE TOPOGRAPHIC SURVEY AREA HAVE NOT BEEN SHOWN.
- UNDERGROUND SANITARY LINE WAS MARKED BY MARCEAU CONSTRUCTION CORP. ON NOVEMBER 11, 2013 AND LOCATED BY CONTROL POINT ASSOCIATES, INC. ON NOVEMBER 11, 2013.
- THERE IS NO OBSERVED EVIDENCE OF RECENT STREET OR SIDEWALK CONSTRUCTION OR REPAIRS.
- CHANGES IN STREET RIGHT OF WAY LINES EITHER COMPLETED OR PROPOSED REVEALED IN THE TITLE REPORT AND REFERENCE MAPS HAVE BEEN SHOWN.
- THE LAND AS DESCRIBED IN THIS SURVEY CONSTITUTES PARCELS 816-96-11, 816-96-11A, 816-96-11B & 816-96-11C, AND THERE ARE NO GAPS, GORES OR STRIPS BETWEEN SUCH PARCELS.
- THE PROPERTY LINE OF PARCELS 816-96-11, 816-96-11A, 816-96-11B & 816-96-11C RUN ALONG THE RIGHT-OF-WAY LINES OF JACKSON STREET, SWAN STREET AND CORNISH STREET.
- PARCELS 816-96-11, 816-96-11A, 816-96-11B & 816-96-11C ARE INDIVIDUALLY DEEDED TAX LOTS WHICH INDICATES THEY COULD BE CONVEYED WITHOUT REQUIRING A SUBDIVISION.

EXHIBIT A

PARCEL I (44 SWAN STREET)

THE LAND IN SAID METHUEN, ESSEX COUNTY, COMMONWEALTH OF MASSACHUSETTS, BOUNDED AND DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT IN THE NORTHERLY LINE OF SWAN STREET WHICH IS TWO HUNDRED SEVENTY-FIVE (275) FEET WEST OF THE WESTERLY LINE OF JACKSON STREET EXTENSION, THENCE

WESTERLY ABOUT ONE HUNDRED SEVEN (107) FEET ALONG SAID LINE OF SWAN STREET TO A SPIKE

IN THE GROUND; THENCE

NORTHERLY AT AN ANGLE OF 98° 51' 30" ONE HUNDRED SIX (106) FEET MORE OR LESS BY LAND NOW OR FORMERLY OF FINEISEN'S FARMS ICE CREAM CO. TO A STAKE; THENCE

EASTERLY AT AN ANGLE OF 81° 8' 30" ABOUT ONE HUNDRED THIRTY-ONE (131) FEET BY LAND NOW OR FORMERLY OF FINEISEN'S ICE CREAM CO. TO A STAKE; THENCE

SOUTHERLY SEVENTY-FOUR (74) FEET BY LAND NOW OR FORMERLY OF FINEISEN'S ICE CREAM CO. TO A STAKE; THENCE

WESTERLY FIVE (5) FEET BY A STAKE AND THENCE SOUTHERLY THIRTY-FIVE (35) FEET, BOTH COURSES BY LAND NO (NOW) OR FORMERLY OF FINEISEN'S ICE CREAM CO. TO THE POINT OF BEGINNING.

PARCEL II(3 CORNISH EXTENSION)

THE LAND IN METHUEN, ESSEX COUNTY, COMMONWEALTH OF MASSACHUSETTS, BEING MORE PARTICULARLY BOUNDED AND DESCRIBED AS FOLLOWS:

WESTERLY ONE HUNDRED (100) FEET BY CORNISH EXTENSION, SO CALLED;

NORTHERLY ONE HUNDRED (100) FEET BY LAND NOW OR FORMERLY OF FINEISEN'S ICE CREAM CO.;

EASTERLY ONE HUNDRED (100) FEET BY LAND NOW OR FORMERLY OF FINEISEN'S ICE CREAM CO.;

SOUTHERLY ONE HUNDRED (100) FEET BY LAND NOW OR FORMERLY OF SAAB.

THE SOUTHWESTERLY CORNER OF SAID PREMISES IS ONE HUNDRED FOUR (104) FEET NORTH OF THE NORTHERN LINE OF SWAN STREET.

REFERENCES:

- THE TAX ASSESSOR'S MAP OF THE CITY OF METHUEN, ESSEX COUNTY, COMMONWEALTH OF MASSACHUSETTS, MAPS #J14 & J15.
- MAP ENTITLED "NATIONAL FLOOD INSURANCE PROGRAM, FIRM, FLOOD INSURANCE RATE MAP, ESSEX COUNTY, MASSACHUSETTS, (ALL JURISDICTIONS), PANEL 206 OF 600," MAP NUMBER 25009C0206F, EFFECTIVE DATE: JULY 3, 2013.
- MAP ENTITLED "PLAN OF LAND IN METHUEN, MASS., FINEISEN'S FARMS ICE CREAM CO. - OWNER," PREPARED BY NEW ENGLAND SURVEY SERVICE, INC., DATED JUNE 14, 1980, FILED IN ESSEX NORTH DISTRICT REGISTRY OF DEEDS ON OCTOBER 24, 1980 IN BOOK 924, PAGE 265 AS PLAN #4155.
- MAP ENTITLED "PLAN OF LAND IN METHUEN, MA, PREPARED FOR: MARK INVESTMENT, INC.," PREPARED BY BRUCE SALUK & ASSOCIATES, INC., DATED: DECEMBER 14, 2000, FILED IN ESSEX NORTH DISTRICT REGISTRY OF DEEDS ON MARCH 2, 2001 AS PLAN #13946.
- MAP ENTITLED "METHUEN, MASS., OWNED BY JAMES T. LONG," PREPARED BY JOHN T. DESMOND, DATED MAY, 1906, FILED IN THE ESSEX NORTH DISTRICT REGISTRY OF DEEDS ON MARCH 4, 1910 AS PLAN BOOK 1, PAGE 49.
- MAP ENTITLED "PLAN OF LAND IN METHUEN, MASS., PREPARED FOR RAYMOND RUHANN," PREPARED BY STOWERS ASSOCIATES, INC., DATED JUNE 2002, FILED IN ESSEX NORTH DISTRICT REGISTRY OF DEEDS ON OCTOBER 11, 2002 AS PLAN #14389.
- WATER FACILITY MAPPING PROVIDED BY THE CITY OF METHUEN ENGINEERING DEPARTMENT.
- SEWER FACILITY MAPPING PROVIDED BY THE CITY OF METHUEN ENGINEERING DEPARTMENT.

TO: McDONALD'S USA, LLC
CHICAGO TITLE INSURANCE COMPANY

3	UPDATE WITH RECEIPT F TITLE	N/A	J.L.	A.J.L.	12-2-13
2	ADDITIONAL TOPOGRAPHY	S.P.P.	J.L.S.	A.J.L.	11-19-13
1	ADDED APPROXIMATE CITYLINE	N/A	J.L.S.	A.J.L.	10-25-13

NO THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT WAS BASED WERE MADE IN ACCORDANCE WITH THE 2011 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/ACSM LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPE, AND INCLUDES ITEMS 2, 3, 4, 5, 6(b), 7(a), 7(b)(1), 7(c), 8, 9, 11(b), 13, 14, 17 AND 20. THE FIELD WORK WAS COMPLETED ON NOVEMBER 19, 2013.

NOT A VALID ORIGINAL DOCUMENT UNLESS EMBOSSED WITH A RAISED IMPRESSION OR STAMPED WITH A BLUE INK SEAL.

A. JOHN LLOYD					
MASSACHUSETTS PROFESSIONAL LAND SURVEYOR #58385					
FIELD DATE 11-11-13 10-9-13	FIELD BOOK NO 13-02 13-24	FIELD BOOK PG 76-77 36-39	FIELD CREW S.P.P. T.M.	ALTA/ACSM LAND TITLE SURVEY McDONALD'S USA, LLC SWAN STREET & CORNISH STREET EXTENSION PARCELS 816-96-11, 816-96-11A, 816-96-11B & 816-96-11C CITY OF METHUEN, ESSEX COUNTY COMMONWEALTH OF MASSACHUSETTS	
L/C# 020-1133	IDV-AMK	McDONALD'S	CONTROL POINT ASSOCIATES, INC. 352 TURNPIKE ROAD SOUTHBOROUGH, MA 01772 508.948.3000 - 508.948.3003 FAX WARREN, NJ 07068-0099 CHALFON, PA 215.712.9800		
Reviewed: J.L.S.	Approved: A.J.L.	Date: 10-23-13	Scale: 1"=20'	File No.: CM13231	Dwg. No.: 2 OF 2