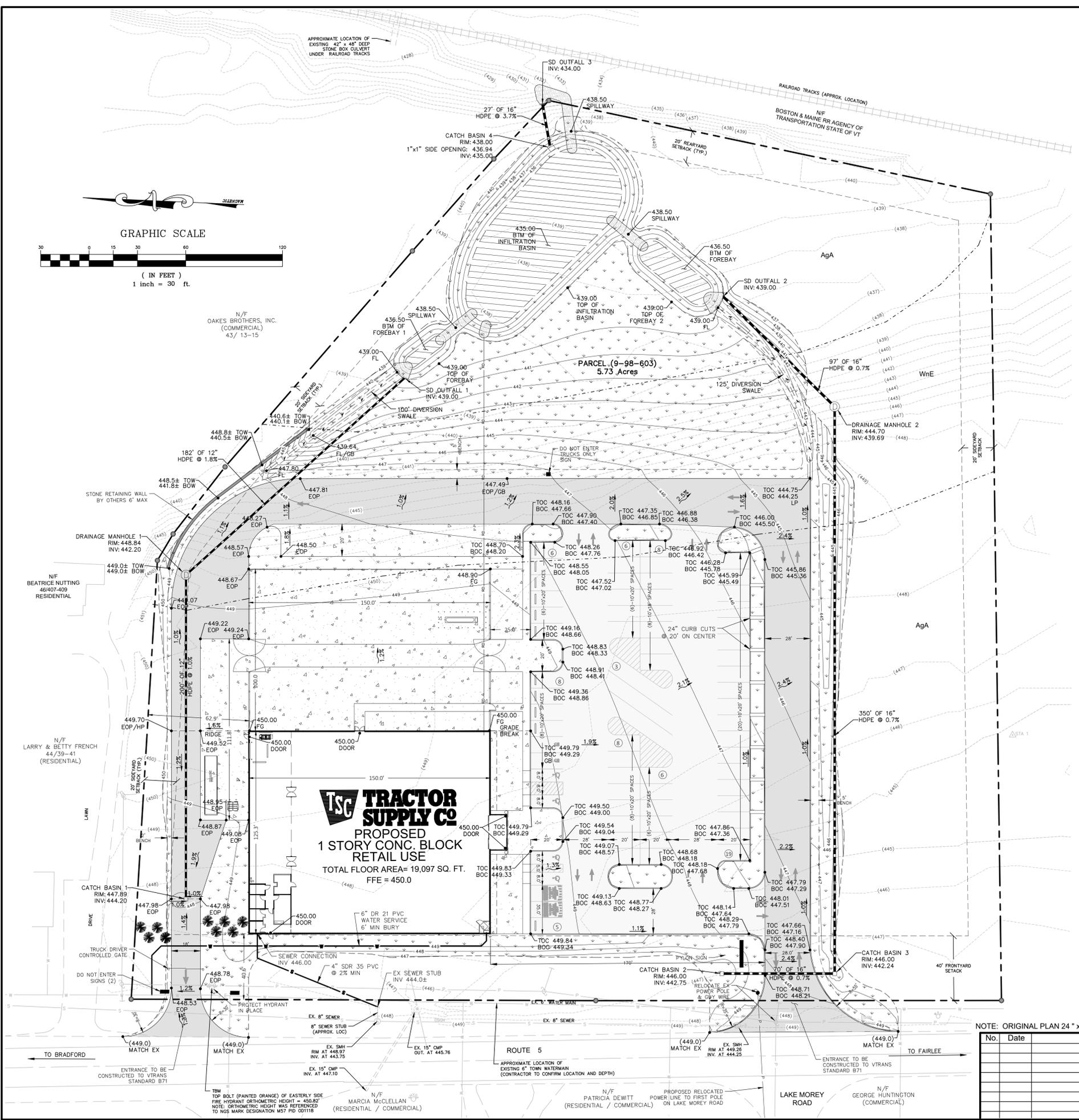
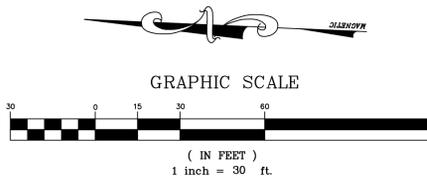


**LEGEND**

- RELOCATED UTILITY POLE
- PRO. CATCH BASIN
- PRO. MANHOLE
- PRO. STORM DRAIN
- PRO. ROOF DRAIN
- PRO. POWER LINE
- PRO. SEWER LINE
- PRO. WATER LINE
- PRO. CONTOURS
- PROPERTY LINE
- SETBACK LINE
- EDGE OF ROAD/DRIVE
- EX. WATER LINE
- EX. STORM DRAIN
- EX. POWER LINE
- EX. CONTOURS
- SOIL BOUNDARY
- EX. POWER POLE
- SURVEY CONTROL POINT
- IRON PIN/ROD
- STANDARD DUTY PAVEMENT
- HEAVY DUTY PAVEMENT
- CONCRETE
- GRASS
- STORMWATER TREATMENT

**ABBREVIATIONS**

- BOC BOTTOM OF CURB
- BOW BOTTOM OF WALL
- CB CATCH BASIN
- EOP EDGE OF PAVEMENT
- EX EXISTING
- FG FINISHED GRADE
- FL FLOW LINE
- GB GRADE BREAK
- HP HIGH POINT
- LP LOW POINT
- MH MANHOLE
- OC ON CENTER
- SD STORM DRAIN
- SO SIDE OPENING
- TOC TOP OF CURB
- TOW TOP OF WALL



NOTE: ORIGINAL PLAN 24" x 36". OTHER SIZES NOT TO SCALE

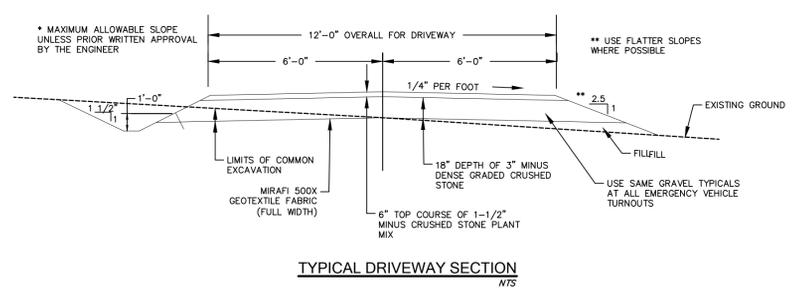
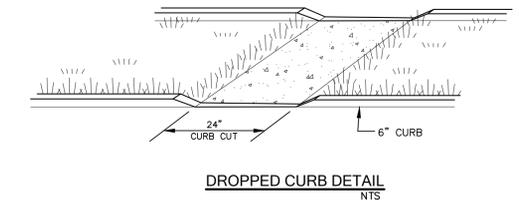
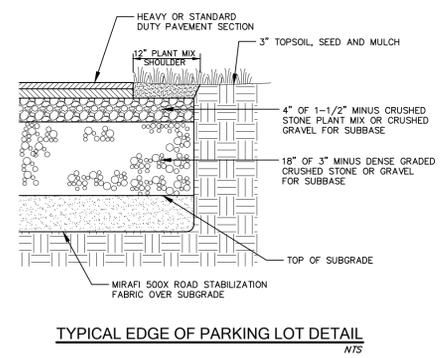
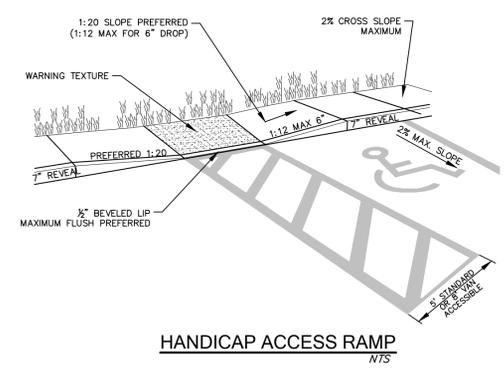
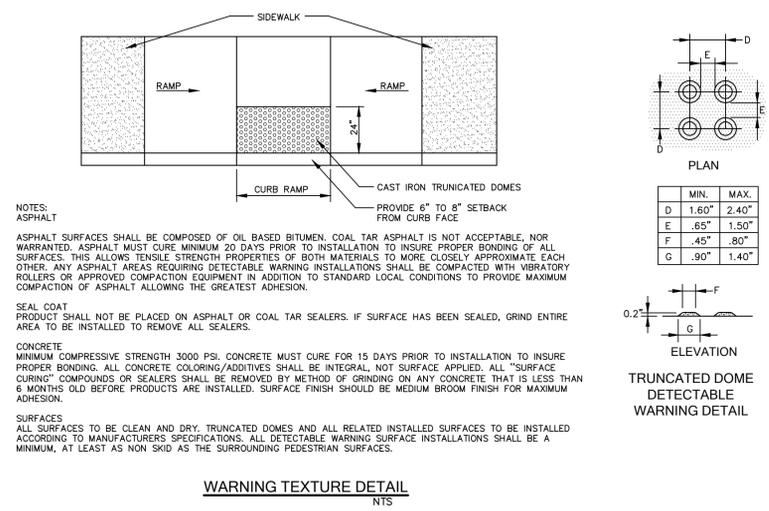
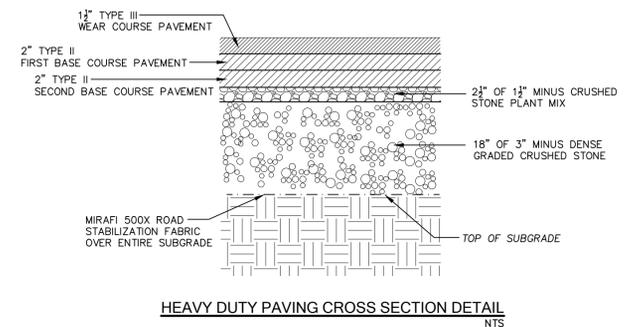
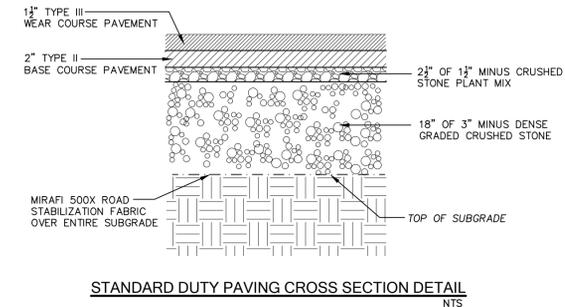
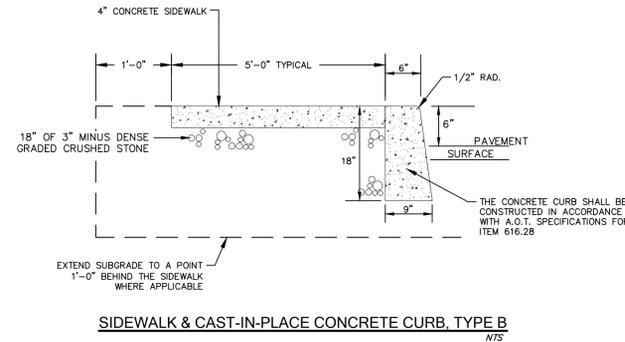
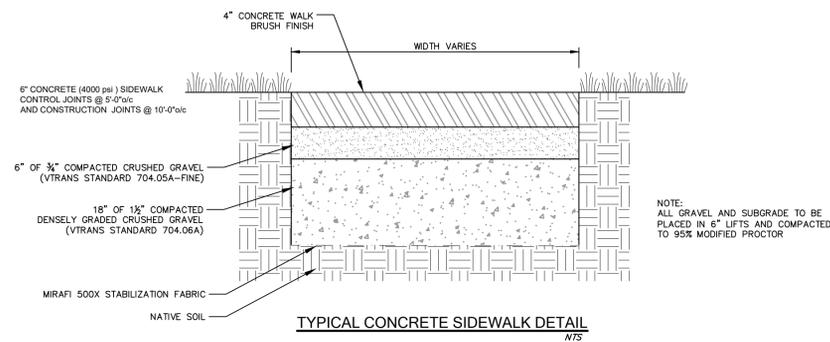
No.	Date	Revision	By



**SITE PLAN**  
**TRACTOR SUPPLY**  
**ROUTE 5 BRADFORD**

**GRENIER ENGINEERING, PC**  
155 DEMERITT PLACE #2

Date: 8.5.20  
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 Sheet No: SP-1



NOTE: ORIGINAL PLAN 24" x 36". OTHER SIZES NOT TO SCALE

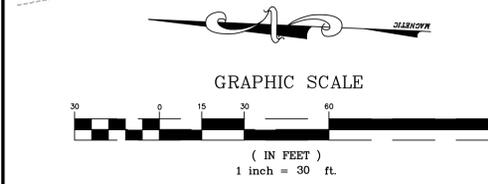
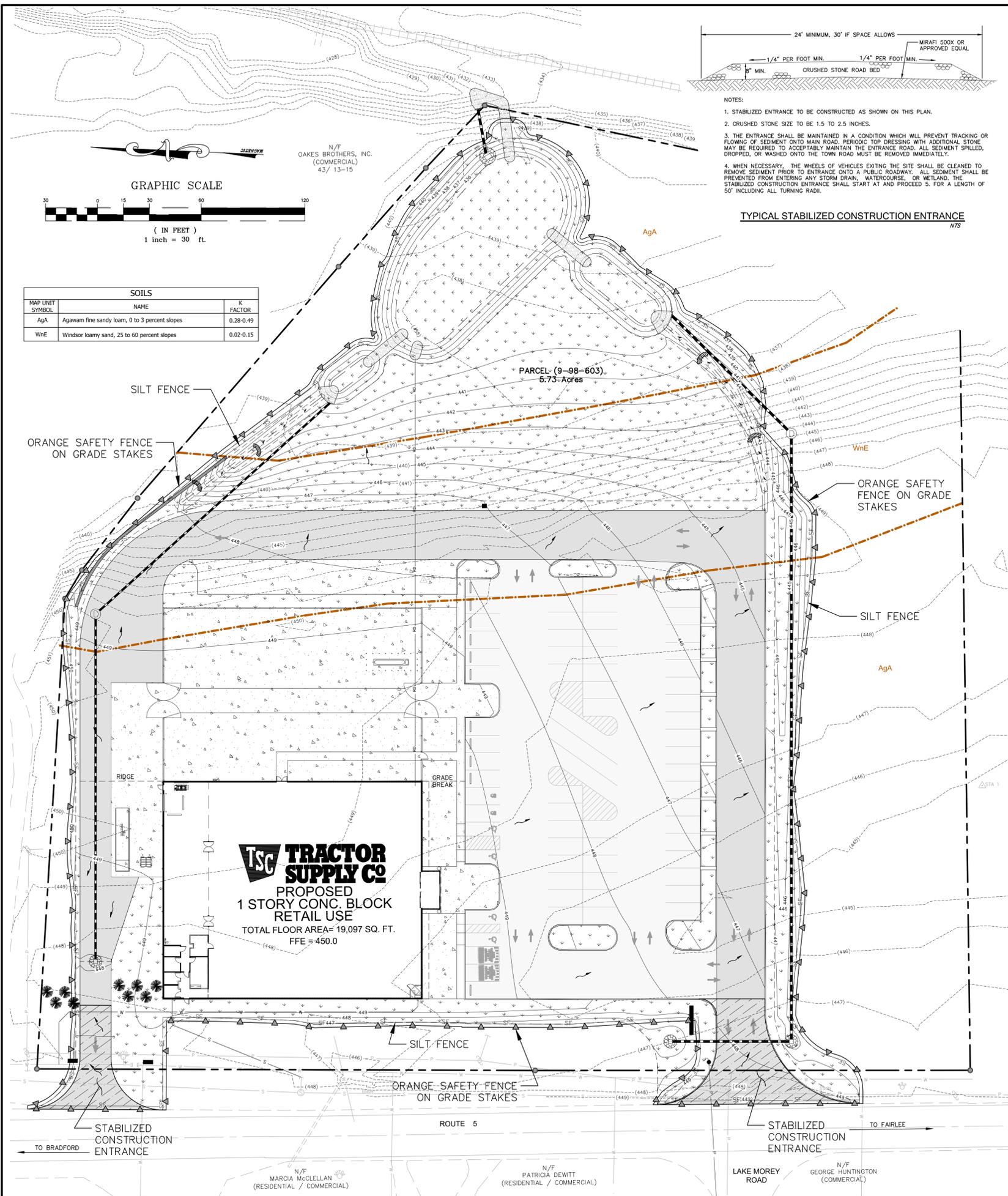
No.	Date	Revision	By

CONSTRUCTION DETAILS  
TRACTOR SUPPLY  
ROUTE 5 BRADFORD

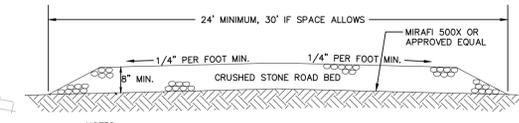
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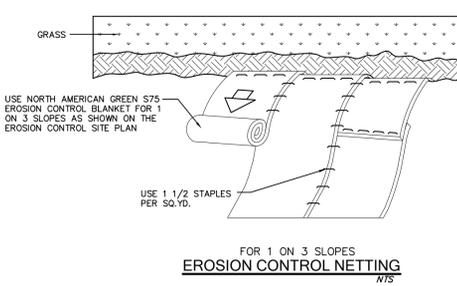


SOILS		
MAP UNIT SYMBOL	NAME	K FACTOR
AgA	Agawam fine sandy loam, 0 to 3 percent slopes	0.28-0.49
WnE	Windsor loamy sand, 25 to 60 percent slopes	0.02-0.15

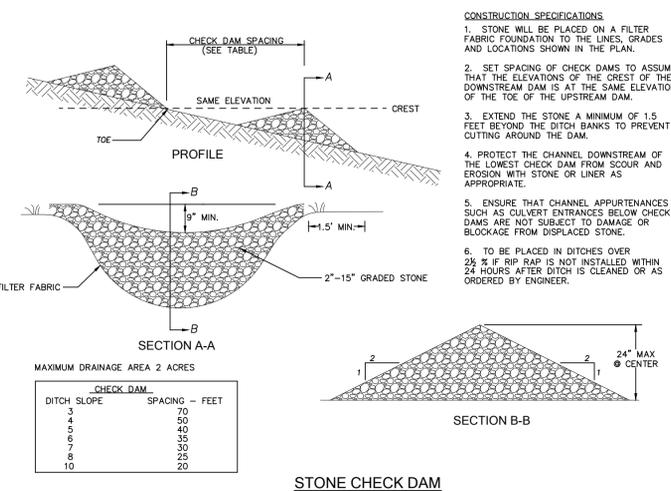


- NOTES:
1. STABILIZED ENTRANCE TO BE CONSTRUCTED AS SHOWN ON THIS PLAN.
  2. CRUSHED STONE SIZE TO BE 1.5 TO 2.5 INCHES.
  3. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO MAIN ROAD. PERIODIC TOP DRESSING WITH ADDITIONAL STONE MAY BE REQUIRED TO ACCEPTABLY MAINTAIN THE ENTRANCE ROAD. ALL SEDIMENT SPILLED, DROPPED, OR WASHED ONTO THE TOWN ROAD MUST BE REMOVED IMMEDIATELY.
  4. WHEN NECESSARY, THE WHEELS OF VEHICLES EXITING THE SITE SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO A PUBLIC ROADWAY. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, WATERCOURSE, OR WETLAND. THE STABILIZED CONSTRUCTION ENTRANCE SHALL START AT AND PROCEED 5' FOR A LENGTH OF 50' INCLUDING ALL TURNING RADI.

TYPICAL STABILIZED CONSTRUCTION ENTRANCE  
N/S



FOR 1 ON 3 SLOPES  
EROSION CONTROL NETTING  
N/S

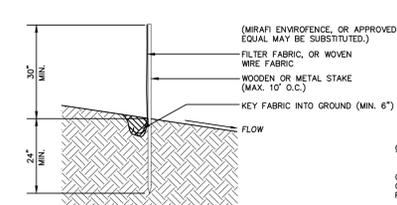


- CONSTRUCTION SPECIFICATIONS:
1. STONE WILL BE PLACED ON A FILTER FABRIC FOUNDATION TO THE LINES, GRADES AND LOCATIONS SHOWN IN THE PLAN.
  2. SET SPACING OF CHECK DAMS TO ASSUME THAT THE ELEVATIONS OF THE CREST OF THE DOWNSTREAM DAM IS AT THE SAME ELEVATION OF THE TOE OF THE UPSTREAM DAM.
  3. EXTEND THE STONE A MINIMUM OF 1.5 FEET BEYOND THE DITCH BANKS TO PREVENT CUTTING AROUND THE DAM.
  4. PROTECT THE CHANNEL DOWNSTREAM OF THE LOWEST CHECK DAM FROM SCOUR AND EROSION WITH STONE OR LINER AS APPROPRIATE.
  5. ENSURE THAT CHANNEL APPURTENANCES SUCH AS CULVERT ENTRANCES BELOW CHECK DAMS ARE NOT SUBJECT TO DAMAGE OR BLOCKAGE FROM DISPLACED STONE.
  6. TO BE PLACED IN DITCHES OVER 2% IF RIP RAP IS NOT INSTALLED WITHIN 24 HOURS AFTER DITCH IS CLEANED OR AS ORDERED BY ENGINEER.

STONE CHECK DAM  
N/S

- NAIL/STAPLE TAPE TO STAKES.
- DO NOT ATTACH TAPE TO SILT FENCE STAKES.
- TAPE CAN BE ATTACHED TO TREES INSTEAD OF STAKES.
- ORANGE PLASTIC SNOW FENCE CAN BE USED IN PLACE OF 4" TAPE.

4" ORANGE BARRIER TAPE DETAIL  
N/S

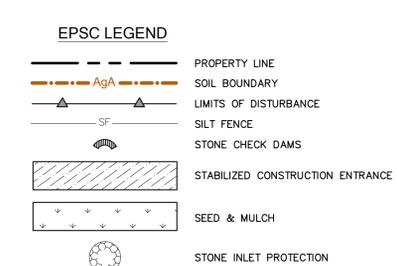


- CONSTRUCTED-IN-PLACE SILT FENCE
- 1) FENCE POST SHALL BE DRIVEN 10 FEET MAXIMUM ON CENTER. POSTS SHALL BE DRIVEN MINIMUM 24" BELOW GRADE. FENCE SHALL BE POSITIONED AS SHOWN, PARALLEL TO THE GROUND CONTOURS.
  - 2) TRENCH SHALL BE EXCAVATED MINIMUM 6 INCHES DEEP ON UPSLOPE SIDE OF FENCE LINE.
  - 3) WOVEN WIRE FABRIC (14 GA., 6 INCH MAX. MESH OPENING) SHALL BE STAPLED OR FASTENED SECURELY WITH WIRE TIES TO UPSLOPE SIDE OF FENCE POSTS. WOVEN WIRE FABRIC SHALL EXTEND MINIMUM 36 INCHES ABOVE GRADE.
  - 4) FILTER FABRIC SHALL BE FASTENED SECURELY ON UPSLOPE SIDE OF WOVEN WIRE FABRIC WITH WIRE TIES. SPACING EVERY 24 INCHES. AT TOP AND MID-SECTION OF FENCE. MINIMUM 8 INCH FLAP OF FILTER FABRIC SHALL BE PLACED IN TRENCH ON UPSLOPE SIDE OF FENCE, AND BACKFILLED.
  - 5) WHEN TWO SECTIONS OF FABRIC ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY 6 INCHES, FOLDED AND BACKFILLED.
  - 6) SILT FENCE SHALL BE INSPECTED WEEKLY, AND AFTER EACH SIGNIFICANT PRECIPITATION EVENT. MAINTENANCE SHALL BE PERFORMED AS NEEDED, AND SEDIMENT REMOVED WHEN "BULGES" DEVELOP IN SILT FENCE.

CONSTRUCTION SPECIFICATIONS FOR SILT FENCE

- SILT FENCE SHALL BE EITHER PRE-FABRICATED EROSION CONTROL FENCE (MIRAFI ENVROFENCE, OR EQUAL), OR CONSTRUCTED-IN-PLACE, AS SPECIFIED HEREIN.
- PRE-FABRICATED SILT FENCE
- 1) FENCE SHALL BE INSTALLED PARALLEL TO GROUND CONTOURS, AND FILTER FABRIC SIDE SHALL FACE UPSLOPE; MESH AND STAKES SHALL FACE DOWNSLOPE.
  - 2) TRENCH SHALL BE EXCAVATED MINIMUM 6 INCHES DEEP ON UPSLOPE SIDE OF FENCE LINE. EXCESS FLAP OF FILTER FABRIC (MINIMUM 8 INCHES) SHALL BE PLACED IN TRENCH. TRENCH SHALL BE BACKFILLED AND COMPACTED. CONSTRUCTION IN THIS MANNER PREVENTS SEDIMENT-LOADED RUNOFF FROM FLOWING UNDER SILT FENCE.
  - 3) SILT FENCE SHALL BE INSPECTED WEEKLY, AND AFTER EACH SIGNIFICANT PRECIPITATION EVENT. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND SEDIMENT SHALL BE REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.
  - 4) BROKEN STAKES SHALL BE REPLACED PROMPTLY.

SILT FENCE  
N/S



EROSION CONTROL/CONSTRUCTION SEQUENCE

- PROJECT COMPONENTS
1. INSTALL LIMITS OF DISTURBANCE & CONSTRUCTION ENTRANCES.
  2. MASS EXCAVATION FOR FOUNDATIONS & STOCKPILE TOPSOIL FOR BERMS.
  3. EXCAVATE AND INSTALL SUBBASE FOR PARKING & DRIVE LANES
  4. INSTALL STORMWATER SYSTEM AND EXPAND INFILTRATION PONDS.
  5. CONSTRUCT BUILDING.
  6. FINAL GRADING OF THE SITE, SEED AND MULCH ALL DISTURBED AREAS.
- GENERAL OBJECTIVES
- THE OVERALL OBJECTIVE OF THE PLAN IS TO MINIMIZE THE EROSION OF DISTURBED LAND AND TO PREVENT THE DISCHARGE OF SEDIMENT AND OTHER CONSTRUCTION-RELATED POLLUTANTS TO WATERS OF THE STATE. THIS PLAN HAS BEEN DEVELOPED WITH THE USE OF THE VERMONT STANDARDS AND SPECIFICATIONS FOR EROSION PREVENTION AND SEDIMENT CONTROL 2006. THE ACCEPTABLE MANAGEMENT PRACTICES FOR MAINTAINING WATER QUALITY ON LOGGING JOBS IN VERMONT (AMP'S) AND THE WINTER CONSTRUCTION EROSION PREVENTION AND SEDIMENT CONTROL PAMPHLET.
- ADDITION OBJECTIVES ARE:
1. CONDUCT SITE WORK IN A PHASED METHOD THAT MINIMIZES THE AMOUNT OF DISTURBED SOIL PRESENT AT ANY GIVEN POINT IN TIME.
  2. PREVENT THE TRANSPORT OF SEDIMENTS FROM THE SITE DUE TO EROSION FROM STORMWATER RUNOFF.
  3. PERFORM RESTORATION AS RAPIDLY AS POSSIBLE FOLLOWING SITE DISTURBANCE.
  4. THE TOTAL DISTURBANCE FOR THIS PROJECT IS 6.4 ACRES.
  5. CONTRACTOR WILL IMPLEMENT TEMPORARY STABILIZATION (MULCH) WITHIN 14 DAYS OF INITIAL DISTURBANCE.
  6. NO MORE THAN 4 ACRES CAN BE DISTURBED AT ONE TIME.

EROSION CONTROL NOTES

1. PROPERTY LINES SHOWN ON THESE PLANS ARE BASE UPON SURVEYS PROVIDED BY OUR OFFICE. THE PROJECT VERTICAL DATUM IS USGS. TOPOGRAPHY AND EXISTING CONTOURS OF THE AREA SHOWN ON THE SITE PLANS WERE DEVELOPED BY FIELD SURVEYS BY OUR OFFICE.
2. ALL DISTURBED AREAS SHALL BE SEEDED AND MULCHED IN THE FOLLOWING PROPORTIONS:
  - A. SEED @ 20 LB/ACRE (CONSERVATION MIX)
  - B. FERTILIZER (300 LB/ACRE OF 10-20-20)
  - C. LIME @ 2 TONS/ACRE
  - D. MULCH @ 2 TONS/ACRE
  - E. TOPSOIL (3" MINIMUM USING ON SITE STOCKPILES SAVED DURING CONSTRUCTION)
  - F. EROSION NETTING (AS NEEDED.)
3. SILT FENCE SHALL BE PLACED AS SHOWN ON THE PLANS TO RETAIN SEDIMENT. THE SILT FENCE CAN BE REMOVED WHEN THE EXCAVATION IS COMPLETE, THE SLOPES ARE MULCHED AND GOOD GRASS COVER STARTED.
4. IT IS ANTICIPATED THAT ADDITIONAL EROSION CONTROL MEASURES WILL BE REQUIRED IN THE FIELD. THE ENGINEER SHALL AUTHORIZE ADDITIONAL NETTING, MULCH, STONE, CULVERTS, ETC. AS THEY BECOME NECESSARY.
5. SILT FENCE TRAPS SHALL BE PLACED AT THE INLET END OF ALL CULVERTS TO RETAIN SEDIMENT.
6. THE "STATE EROSION CONTROL HANDBOOK" SHALL BE FOLLOWED DURING ALL SITE CONSTRUCTION.
7. A PRECONSTRUCTION MEETING WILL BE HELD WITH THE OWNER, ENGINEER AND CONTRACTOR TO REVIEW EROSION CONTROL REQUIREMENTS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
8. NO MORE THAN 100' OF TRENCH SHALL BE OPEN AT ONE TIME. THE TRENCH SHALL BE BACK FILLED DAILY. EXTRA MATERIAL SHALL BE PLACED ON THE EXCAVATED AREA TO OVERFILL THE TRENCH AND ALLOW FOR SETTLING. THE FILL MATERIAL SHALL BE GRADED TO FORM A CROWN OR AS NEEDED IN ORDER TO FACILITATE PROPER DRAINAGE. THE KEY IS TO PREVENT WATER FROM FOLLOWING AND CONCENTRATING ALONG THE EXCAVATED AREA OF THE TRENCH LINE. BUILT UP WATER BARS MAY ALSO BE USED TO PROMOTE SHEDDING OF WATER AWAY FROM THE EXCAVATED AREA. THE COMPLETED AREAS OF EXCAVATION SHALL BE SEEDED AND MULCHED DAILY.
9. MAINTENANCE AND INSPECTIONS: INSPECTIONS TO BE PERFORMED A MINIMUM OF ONCE PER WEEK. ALSO, PRIOR TO AND IMMEDIATELY FOLLOWING STORM EVENTS. MAINTENANCE TO BE PERFORMED AS NEEDED BASED ON INSPECTIONS.

EROSION PROTECTION & SEDIMENT CONTROL PLAN  
TRACTOR SUPPLY  
ROUTE 5 BRADFORD

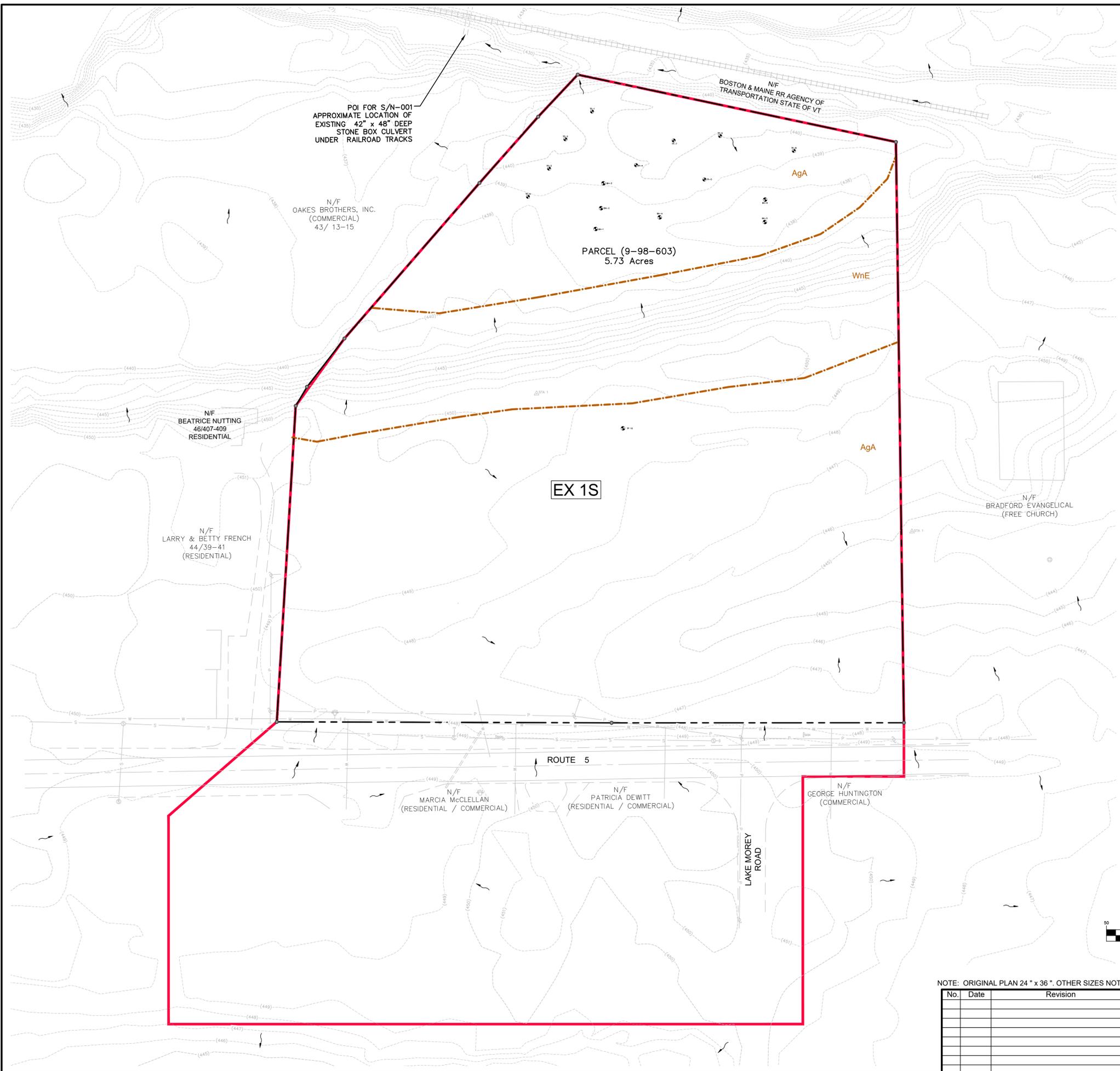
NOTE: ORIGINAL PLAN 24" x 36". OTHER SIZES NOT TO SCALE

No.	Date	Revision	By



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155 DEMERITT PLACE #2

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POI FOR S/N-001  
APPROXIMATE LOCATION OF  
EXISTING 42" x 48" DEEP  
STONE BOX CULVERT  
UNDER RAILROAD TRACKS

N/F  
OAKES BROTHERS, INC.  
(COMMERCIAL)  
43/ 13-15

PARCEL (9-98-603)  
5.73 Acres

N/F  
BEATRICE NUTTING  
46/407-409  
RESIDENTIAL

N/F  
LARRY & BETTY FRENCH  
44/39-41  
(RESIDENTIAL)

EX 1S

N/F  
BRADFORD EVANGELICAL  
(FREE CHURCH)

N/F  
MARCIA McCLELLAN  
(RESIDENTIAL / COMMERCIAL)

N/F  
PATRICIA DEWITT  
(RESIDENTIAL / COMMERCIAL)

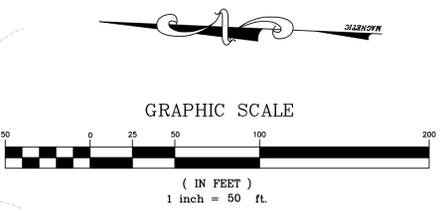
N/F  
GEORGE HUNTINGTON  
(COMMERCIAL)

SOILS		
MAP UNIT SYMBOL	NAME	K FACTOR
AgA	Agawam fine sandy loam, 0 to 3 percent slopes	0.28-0.49
WnE	Windsor loamy sand, 25 to 60 percent slopes	0.02-0.15

BORE HOLE AND INFILTRATION TESTING		
BH #	FIELD VERIFIED - SHWT DEPTH	FIELD VERIFIED - INFILTRATION RATE
1	> 120"	235 IN/HR
2	> 120"	42 IN/HR
3	> 120"	224 IN/HR
4	> 120"	200 IN/HR
5	> 120"	63 IN/HR
5	> 120"	122 IN/HR

DESIGN INFILTRATION RATE = 21.32 IN/HR

SUBCATCHMENTS				
NUM	AREA (AC)	AREA (SF)	SLOPE	HYDRAULIC LENGTH (FT)
EX 1S	8.96	390,300	5.0%	860



LEGEND	
	PROPERTY LINE
	SUBCATCHMENT BOUNDARY
	SOIL BOUNDARY & TYPE
	FLOW PATHS
	TEST PIT
	EX. CONTOURS
	EX. EDGE OF DRIVE/ROAD
	EXISTING TREELINE

NOTE: ORIGINAL PLAN 24" x 36". OTHER SIZES NOT TO SCALE

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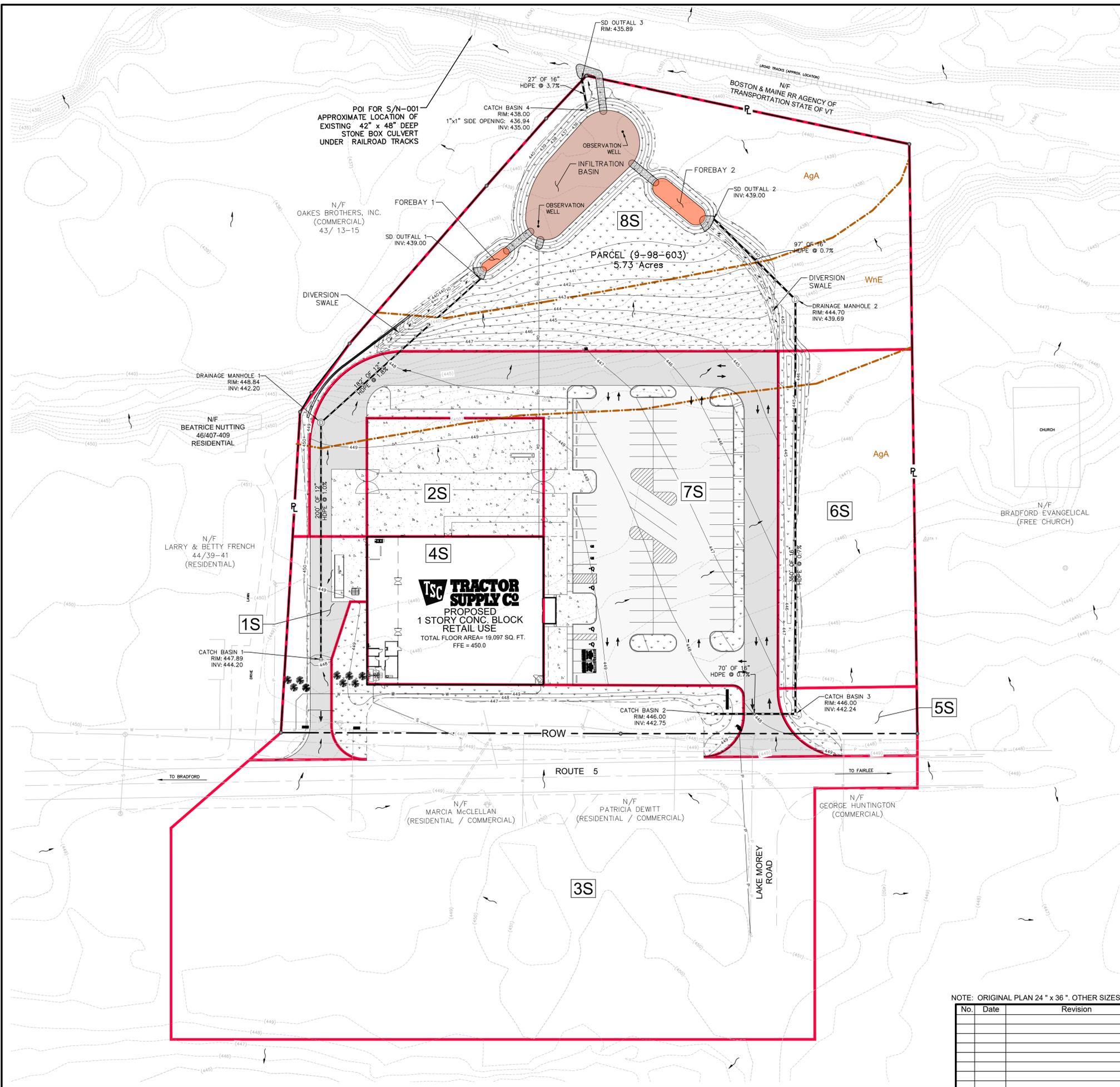
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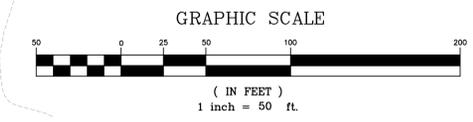
SOILS		
MAP UNIT SYMBOL	NAME	K FACTOR
AgA	Agawam fine sandy loam, 0 to 3 percent slopes	0.28-0.49
WnE	Windsor loamy sand, 25 to 60 percent slopes	0.02-0.15

SUBCATCHMENTS				
NUM	AREA (AC)	AREA (SF)	SLOPE	HYDRAULIC LENGTH (FT)
1S	0.25	10,900	1.4%	91
2S	0.34	15,000	1.1%	110
3S	3.51	153,000	2.0%	440
4S	0.43	18,700	0.5%	126
5S	0.10	4,445	10.0%	53
6S	0.75	32,920	12.3%	175
7S	1.69	73,500	1.5%	286
8S	1.89	82,350	10.0%	306



**LEGEND**

- PROPERTY LINE
- SUBCATCHMENT BOUNDARY
- PRE-TREATMENT FOREBAY
- INFILTRATION BASIN
- DIVERSION SWALE
- SOIL BOUNDARY & TYPE
- FLOW PATHS
- TEST PIT
- PRO. SQUARE CATCH BASIN
- PRO. STORM MANHOLE
- PRO. ROOF DRAIN
- EX. CONTOURS
- PRO. CONTOURS
- EX. EDGE OF DRIVE/ROAD
- PRO. EDGE OF DRIVE/PARKING
- PRO. CURB
- EXISTING TREELINE
- OBSERVATION WELL



NOTE: ORIGINAL PLAN 24" x 36". OTHER SIZES NOT TO SCALE

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**PROPOSED STORMWATER PLAN**  
**TRACTOR SUPPLY**  
**ROUTE 5 BRADFORD**

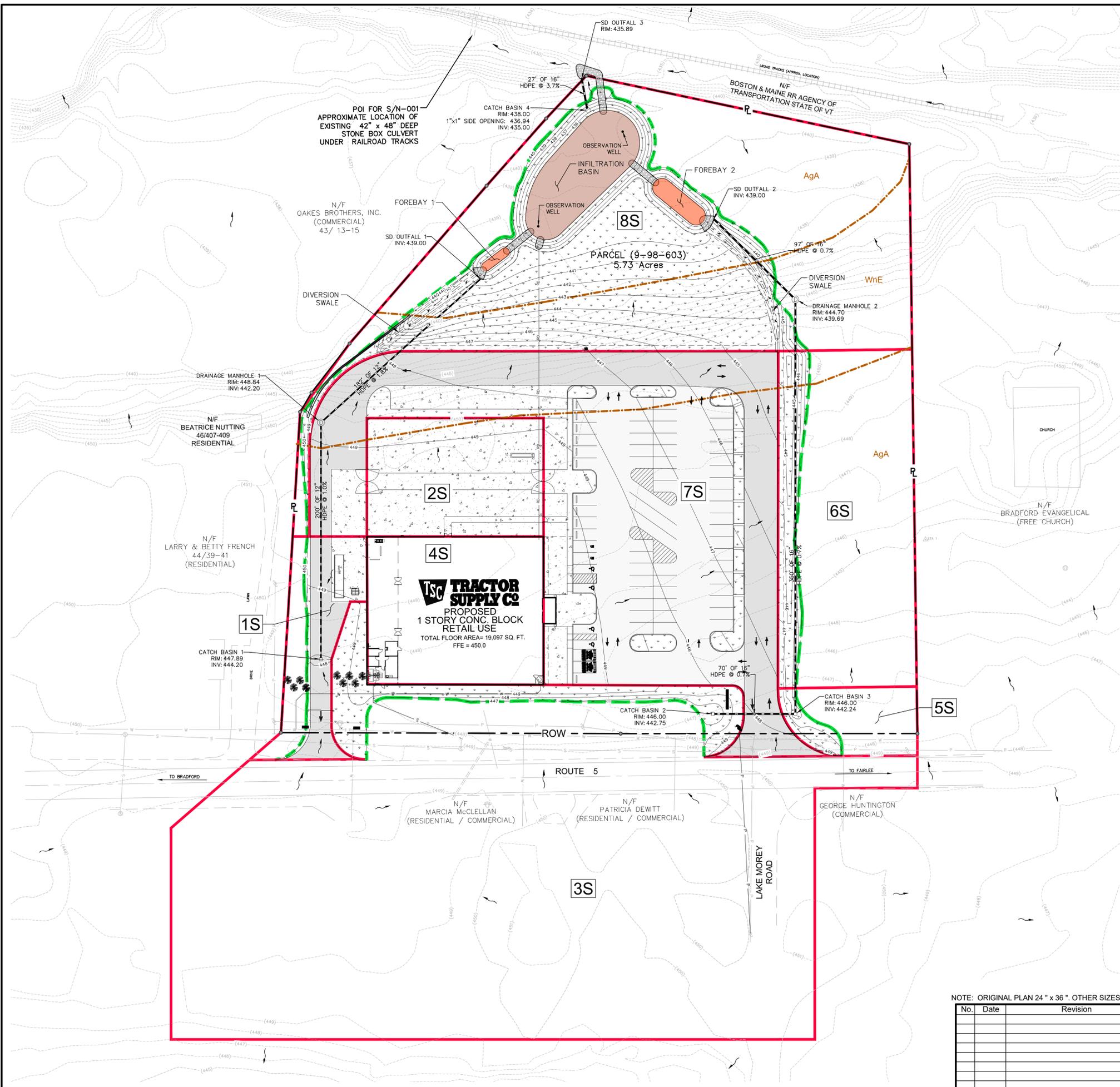
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SOILS		
MAP UNIT SYMBOL	NAME	K FACTOR
AgA	Agawam fine sandy loam, 0 to 3 percent slopes	0.28-0.49
WnE	Windsor loamy sand, 25 to 60 percent slopes	0.02-0.15

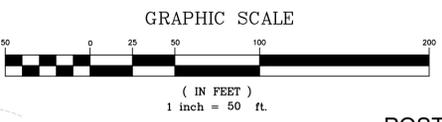
**POST CONSTRUCTION SOIL DEPTH AND QUALITY SPECIFICATIONS**

- SOIL DEPTH AND QUALITY TO BE ESTABLISHED TOWARDS THE END OF CONSTRUCTION. ONCE ESTABLISHED, PROTECT FROM COMPACTION.
1. REMOVE AND STOCKPILE TOPSOIL, MULCH TOPSOIL PILE AND PROTECT WITH SILT FENCE, ENSURE PILE IS MORE THAN 50' FROM ANY WATER.
  2. ONCE FINAL GRADES ARE ESTABLISHED SCARIFY ALL DISTURBED AREA TO DEPTH OF 8".
  3. IMPORT OR AMEND TOPSOIL (IF ALLOWABLE) TO ACHIEVE A MINIMUM OF 4% (DRY WEIGHT) ORGANIC CONTENT USE COMPOST WITH AT LEAST 40% TO 65% ORGANIC CONTENT AT A RATIO OF 1 PART COMPOST TO 3 PARTS TOPSOIL.
  4. PLACE 4" OF IMPORTED OR AMENDED TOPSOIL OVER ALL DISTURBED AREAS.
  5. CONFIRM MINIMUM OF 4" TOPSOIL DEPTH AND 8" LOOSE SOIL DEPTH WITH NINE 8" DEEP TEST HOLES PER ACRE AT 50' O.C. USING A HAND SHOVEL DRIVEN SOLELY BY INSPECTOR'S WEIGHT, FOR ALL DISTURBED AREAS UNDER 33% SLOPE.



**LEGEND**

- PROPERTY LINE
- SUBCATCHMENT BOUNDARY
- PRE-TREATMENT FOREBAY
- INFILTRATION BASIN
- DIVERSION SWALE
- SOIL BOUNDARY & TYPE (AgA, WnE)
- FLOW PATHS
- TEST PIT
- PRO. SQUARE CATCH BASIN
- PRO. STORM MANHOLE
- PRO. ROOF DRAIN
- EX. CONTOURS
- PRO. CONTOURS
- EX. EDGE OF DRIVE/ROAD
- PRO. EDGE OF DRIVE/PARKING
- PRO. CURB
- EXISTING TREELINE
- OBSERVATION WELL
- SOIL RESTORATION BOUNDARY



NOTE: ORIGINAL PLAN 24" x 36". OTHER SIZES NOT TO SCALE

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SOILS		
MAP UNIT SYMBOL	NAME	K FACTOR
AgA	Agawam fine sandy loam, 0 to 3 percent slopes	0.28-0.49
WnE	Windsor loamy sand, 25 to 60 percent slopes	0.02-0.15

**INFILTRATION BASIN MAINTENANCE NOTES:**

1. VISUAL INSPECTION OF INFILTRATION TRENCH TO ENSURE RIGOROUS GROWTH OF VEGETATIVE COVER, CHECK FOR ANY SEDIMENTATION BUILDUP AND EROSION TO BE COMPLETED ANNUALLY.
2. ANY EROSION NOTED SHOULD BE REPORTED TO THE ENGINEER FOR FURTHER EVALUATION AND SEEDED/MULCHED WITHIN 30 DAYS.
3. INFILTRATION PRACTICES SHALL NOT BE USED FOR SNOW STORAGE.

**CATCH BASIN MAINTENANCE NOTES:**

1. VISUAL INSPECTION OF CATCH BASINS TO BE COMPLETED ANNUALLY TO CHECK FOR SEDIMENT ACCUMULATION.
2. SEDIMENT IN CATCH BASINS TO BE CLEANED OUT EVERY THREE YEARS, OR WHEN SEDIMENT LEVEL IS ABOVE LOWEST PIPE INVERT.
3. ANY PIPE DISTURBANCE OR CLOGGING SHOULD BE REPORTED TO THE ENGINEER FOR FURTHER EVALUATION.

**STONE HEADWALL/OUTLET MAINTENANCE NOTES:**

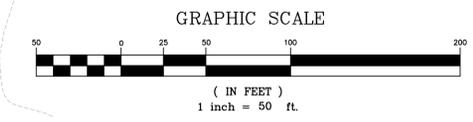
1. VISUAL INSPECTION TO CHECK FOR EVENLY DISTRIBUTED STONE, NO SEDIMENT ACCUMULATION AND EROSION TO BE COMPLETED ANNUALLY.
2. STONE HEADWALL TO BE CHECKED ANNUALLY TO ENSURE STABILITY.
3. IF DEFICIENCIES ARE NOTED, STONE TO BE REMOVED, CLEANED AND PUT BACK IN PLACE WITHIN 30 DAYS AND REPORTED TO THE ENGINEER.

**SEDIMENT FOREBAY MAINTENANCE NOTES:**

1. VISUAL INSPECTION OF SEDIMENT FOREBAY TO BE COMPLETED ANNUALLY.
2. IF SEDIMENT DEPOSITION IS MORE THAN 25% OF FOREBAY DEPTH, REMOVAL OF SEDIMENT IS REQUIRED.
3. ANY EROSION NOTED SHOULD BE REPORTED TO THE ENGINEER FOR FURTHER EVALUATION.

**LEGEND**

---	PROPERTY LINE
---	SUBCATCHMENT BOUNDARY
---	PRE-TREATMENT FOREBAY
---	INFILTRATION BASIN
---	DIVERSION SWALE
---	SOIL BOUNDARY & TYPE
---	FLOW PATHS
○	TEST PIT
□	PRO. SQUARE CATCH BASIN
○	PRO. STORM MANHOLE
○	PRO. ROOF DRAIN
---	EX. CONTOURS
---	PRO. CONTOURS
---	EX. EDGE OF DRIVE/ROAD
---	PRO. EDGE OF DRIVE/PARKING
---	PRO. CURB
---	EXISTING TREELINE
•	OBSERVATION WELL



NOTE: ORIGINAL PLAN 24" x 36". OTHER SIZES NOT TO SCALE

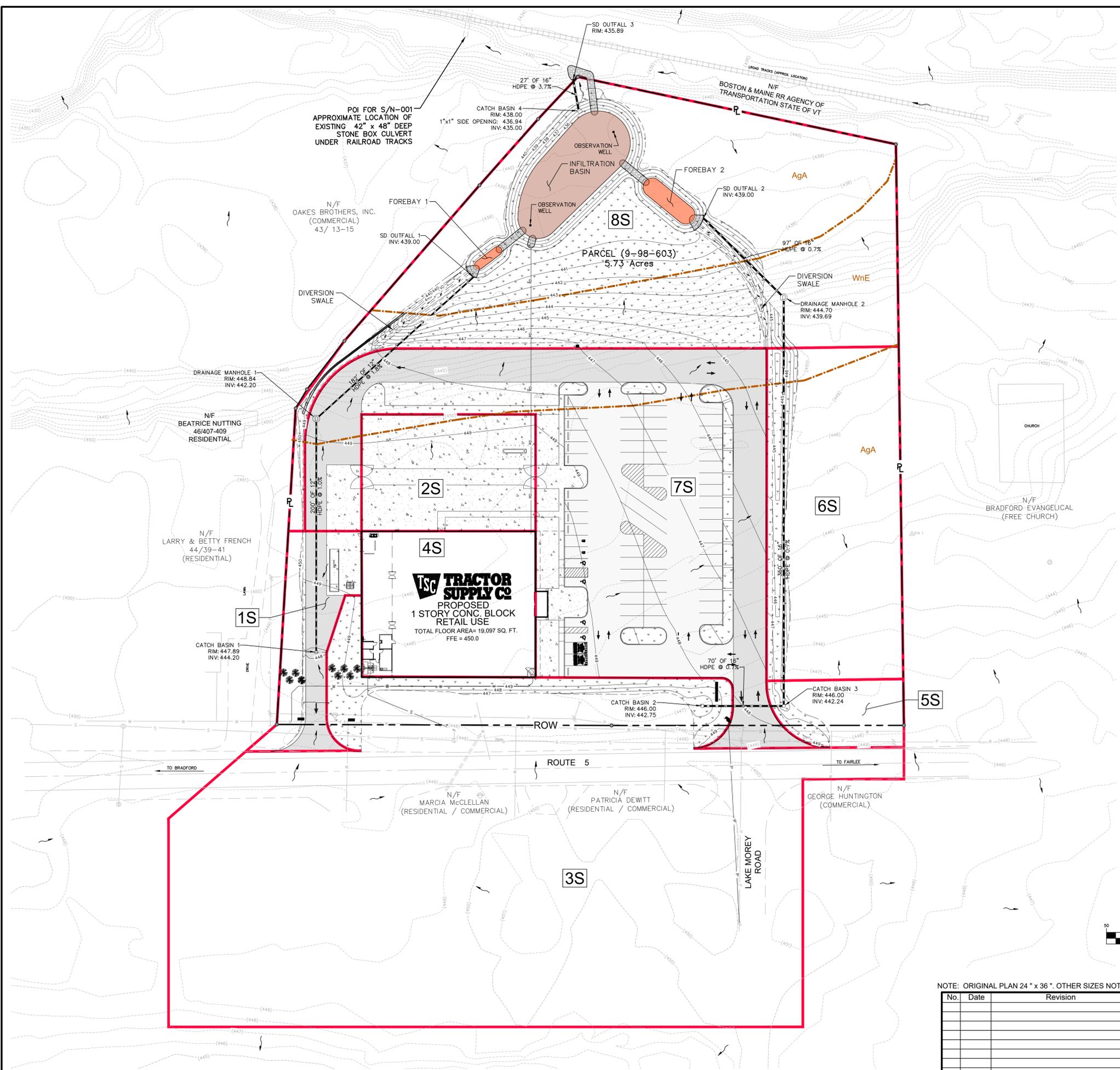
No.	Date	Revision	By

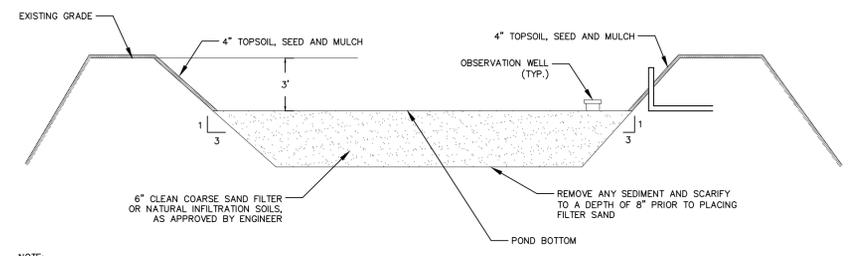
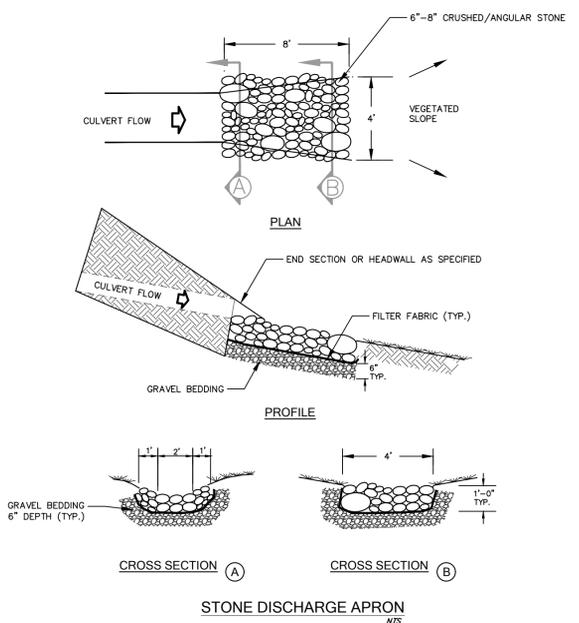


**ANNOTATED MAINTENANCE PLAN**  
**TRACTOR SUPPLY**  
**ROUTE 5 BRADFORD**

**GRENIER ENGINEERING, PC**  
 155 DEMERITT PLACE #2  
 P.O. Box 445  
 Waterbury, VT 05676  
 TEL (802) 244-6413  
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 grenierengineering.com

Date: 8.5.20  
 Scale: AS SHOWN  
 Designed: DRM  
 Drawn: MJB  
 Checked: JDG  
 Sheet No: SW-4



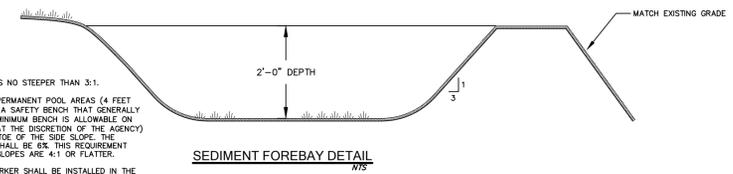


NOTE:  
1. DO NOT DIRECT RUNOFF TO BASIN UNTIL ENTIRE SITE IS STABILIZED WITH RIGOROUS GROWTH OF GRASS SAND FILTER TO MEET THE DAILY SIEVE ANALYSIS

SIEVE	% PASSING
3/8"	100
#4	85 - 100
#8	10 - 40
#16	0 - 10
#50	0 - 5

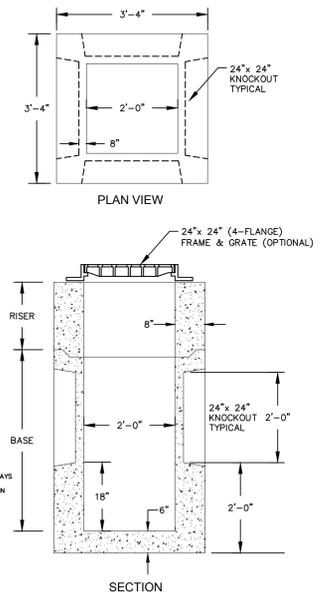
SAND MUST BE APPROVED BY ENGINEER PRIOR TO USE

NOTE:  
1. AN OBSERVATION WELL SHALL CONSIST OF 4 TO 6 INCH DIAMETER PERFORATED PVC PIPE WITH A SCREW TOP CAP, INSTALLED FLUSH WITH THE GROUND SURFACE.  
2. OBSERVATION WELLS SHALL BE INSTALLED EVERY 50 FEET IN AN INFILTRATION TRENCH.



NOTES:  
1. THE FOREBAY SHALL HAVE SIDE SLOPES NO STEEPER THAN 3:1.  
2. THE OUTLET PERIMETER OF ALL DEEP PERMANENT POOL AREAS (4 FEET OR GREATER) SHALL BE SURROUNDED BY A SAFETY BENCH THAT GENERALLY EXTENDS 15 FEET OUTWARD (A 10 FOOT MINIMUM BENCH IS ALLOWABLE ON SITES WITH EXTREME SPACE LIMITATIONS AT THE DISCRETION OF THE AGENCY) FROM THE NORMAL WATER EDGE TO THE TOE OF THE SIDE SLOPE. THE MAXIMUM SLOPE OF THE SAFETY BENCH SHALL BE 8% THIS REQUIREMENT SHALL BE WAIVED WHERE FOREBAY SIDE SLOPES ARE 4:1 OR FLATTER.  
3. A FIXED VERTICAL SEDIMENT DEPTH MARKER SHALL BE INSTALLED IN THE FOREBAY TO MEASURE SEDIMENT DEPOSITION.  
4. THE OUTLET FROM THE FOREBAY SHALL UTILIZE EROSION CONTROL MEASURES TO PREVENT EROSION OF THE EMBANKMENT AND DOWNSTREAM TREATMENT PRACTICES.

- PLANTING GUIDE**
- PREPARATION:**
- REMOVE ALL EXISTING GROWTH, EITHER BY HAND, ROTO-TILLING, ROUGH OR POWER RAKING. TILL ONLY DEEP ENOUGH TO REMOVE ALL OLD ROOTS.
  - DEEP TILLING MAY BRING UP DORMANT WEED SEEDS LYING BENEATH WHICH WILL COMPETE WITH THE NEW SEED.
  - TO ENSURE THAT THE SOIL IS FREE OF WEED SEEDS, TILL THE SOIL AND WAIT FOR THE CROP OF NEW WEEDS TO GROW, USUALLY ONE TO THREE WEEKS, AND THEN TILL AGAIN.
  - SEED AFTER THE SECOND OR THIRD TILLING.
- SEEDING:**
- SEED IMMEDIATELY AFTER PREPARING THE SOIL TO AVOID GIVING POSSIBLE WEEDS AN ADVANTAGE OVER THE NEW SEED YOU WISH TO SOW.
  - USE A HAND CRANK SEED SOWER OR SCATTER THE SEED BY HAND:
    - PUT THE GRASS SEED INTO TWO BUCKETS; ADD IN ANY WILDFLOWER SEED AND SOME SAND: 4 PARTS SAND TO 1 PART SEED. THE SAND MAKES IT EASIER TO SOW EVENLY, AND IT SHOWS WHICH AREAS HAVE BEEN SEEDED.
    - SCATTER ONE BUCKET'S MIX OVER THE AREA TO BE SEEDED. THEN REPEAT THE SECOND BUCKET, IN THE OPPOSITE DIRECTION.
    - ENSURE THERE IS EVEN SPREADING AND NO BARE SPOTS.
  - ONCE SEED IS SOWN, DO NOT RAKE OR COVER IT IN ANY WAY. IF YOU CAN, USE A LAWN ROLLER OR LAY DOWN A LARGE BOARD AND WALK ON IT TO COMPRESS THE SEED INTO THE BARE SOIL.
  - KEEP YOUR NEW SEEDBED MOIST UNTIL SEEDLINGS ARE ABOUT 6–8" TALL. AFTER THAT, THEY SHOULD BE SELF SUFFICIENT; HOWEVER WATERING DURING DROUGHTS WILL KEEP YOUR FLOWERS BLOOMING.
- WATERING:**
- KEEP THE FRESHLY SEEDED AREA WATERED FOR 4–8 WEEKS.
- MAINTENANCE:**
- MOW ANNUALLY IN THE FALL AFTER ONE FROST TO DISPERSE SEED AND TO KEEP DOWN BRUSHY GROWTH.
  - DURING THE ANNUAL INSPECTION, IDENTIFY AREAS THAT HAVE ERODED OR WEED FILLED, AND RESEED THOSE SPOTS AND REMOVE ALL WEEDS.
  - IF THERE IS A LARGE AREA OF WEED GROWTH, RE-TILL AND RE-SEED AS DESCRIBED IN THE PREPARATION NOTES.
- SEED MIXES:**
- CONSERVATION GRASS SEED MIX:**
- CONSERVATION GRASS SEED MIX AND/OR HONEY BEE MIX, OR APPROVED EQUAL.
- DRY SWALE:**
- CONSERVATION GRASS SEED MIX AND/OR APPROVED EQUAL.
- CONSERVATION GRASS SEED MIX:**
- FESTUCA RUBRA (CREEPING RED FESCUE)  
POA PARTENSIS 'ALLEY CAT' (KENTUCKY BLUEGRASS 'ALLEN CAT')  
POA PARTENSIS 'CORSAIR' (KENTUCKY BLUEGRASS 'CORSAIR')  
LOLIUM MULTIFLORUM (ANNUAL RYEGRASS)  
LOLIUM PERENNE 'CONFETTI' (PERENNIAL RYEGRASS 'CONFETTI')
- LIGHT REQUIRED:** SUN TO PARTIAL SHADE  
**APPLICABLE ZONES:** 2, 3, 4, 5, 6, 7, 8, 9  
**SEEDING RATE:** 100–200 LBS PER ACRE OR 3–5 LBS PER 1,000 SQ.FT.  
**WHEN TO PLANT:** SPRING, EARLY SUMMER, FALL
- HONEYBEE MIX:**
- MELILOTUS ALBA (SWEETCLOVER, WHITE BLOSSOM)  
TRIFOLIUM PRATENSE, MEDIUM (RED CLOVER, MEDIUM)  
TRIFOLIUM INCARNATUM (CRIMSON CLOVER)  
TRIFOLIUM REPENS, DUTCH (WHITE CLOVER, DUTCH)  
MELILOTUS OFFICINALIS (YELLOW BLOSSOM SWEETCLOVER)  
TRIFOLIUM MICHELIANUM 'FIXATION' (BALANSA CLOVER 'FIXATION')
- LIGHT REQUIRED:** SUN TO PARTIAL SHADE  
**APPLICABLE ZONES:** 2, 3, 4, 5, 6, 7, 8, 9  
**SEEDING RATE:** MIN. 10–20 LBS PER ACRE OR 1 LB PER 2,000–4,000 SQ.FT.  
**WHEN TO PLANT:** SPRING (AFTER LAST FROST), EARLY SUMMER, FALL



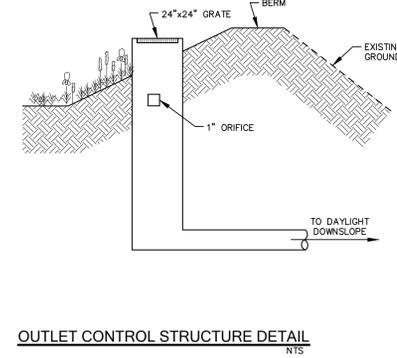
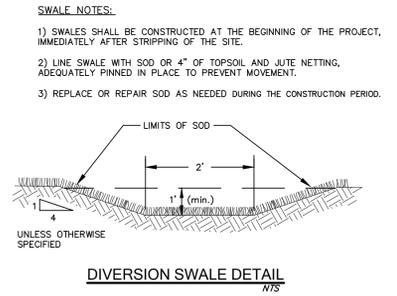
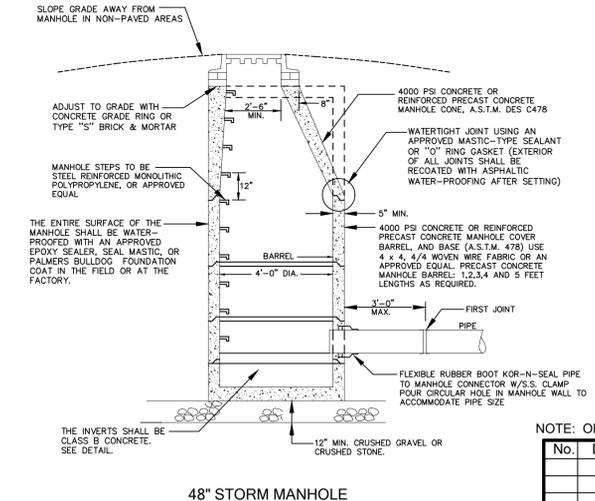
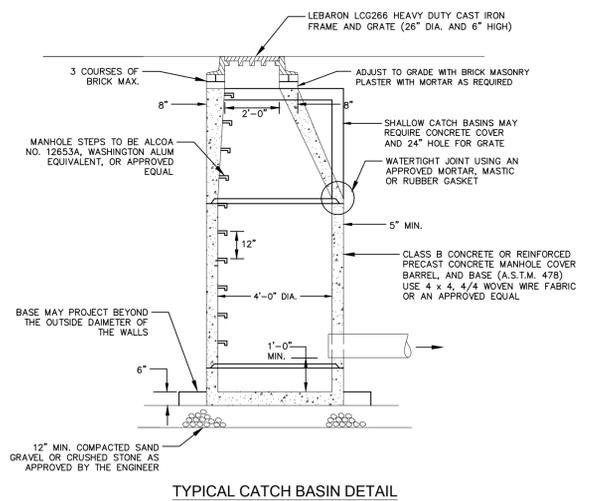
**BASE SECTION**

HEIGHT	ITEM #	WEIGHT
2'-6"	50C824KB-30	2,280 LB
4'-0"	50C824KB-48	3,840 LB

**RISER SECTION**

HEIGHT	ITEM #	WEIGHT
0'-6"	50C824R-6	530 LB
1'-0"	50C824R-12	1,050 LB
1'-6"	50C824R-18	1,580 LB
2'-0"	50C824R-24	2,100 LB

- SPECIFICATIONS:**
- CONCRETE MINIMUM STRENGTH 5000 PSI @ 28 DAYS
  - STEEL REINFORCEMENT GRADE 60 - H-20 DESIGN
  - JOINTS SEALED WITH BUTYL SEALANT.
  - MONOLITHIC CONSTRUCTION
  - WEIGHTS SUBJECT TO VARIATION



NOTE: ORIGINAL PLAN 24" x 36". OTHER SIZES NOT TO SCALE

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**STORMWATER DETAILS**

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155 DEMERITT PLACE #2

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