GROUND-MOUNTED PHOTOVOLTAIC SYSTEM

200 ROUTE 15 STURBRIDGE, MASSACHUSETTS

AUGUST 1, 2023

REVISED: NOVEMBER 15, 2023

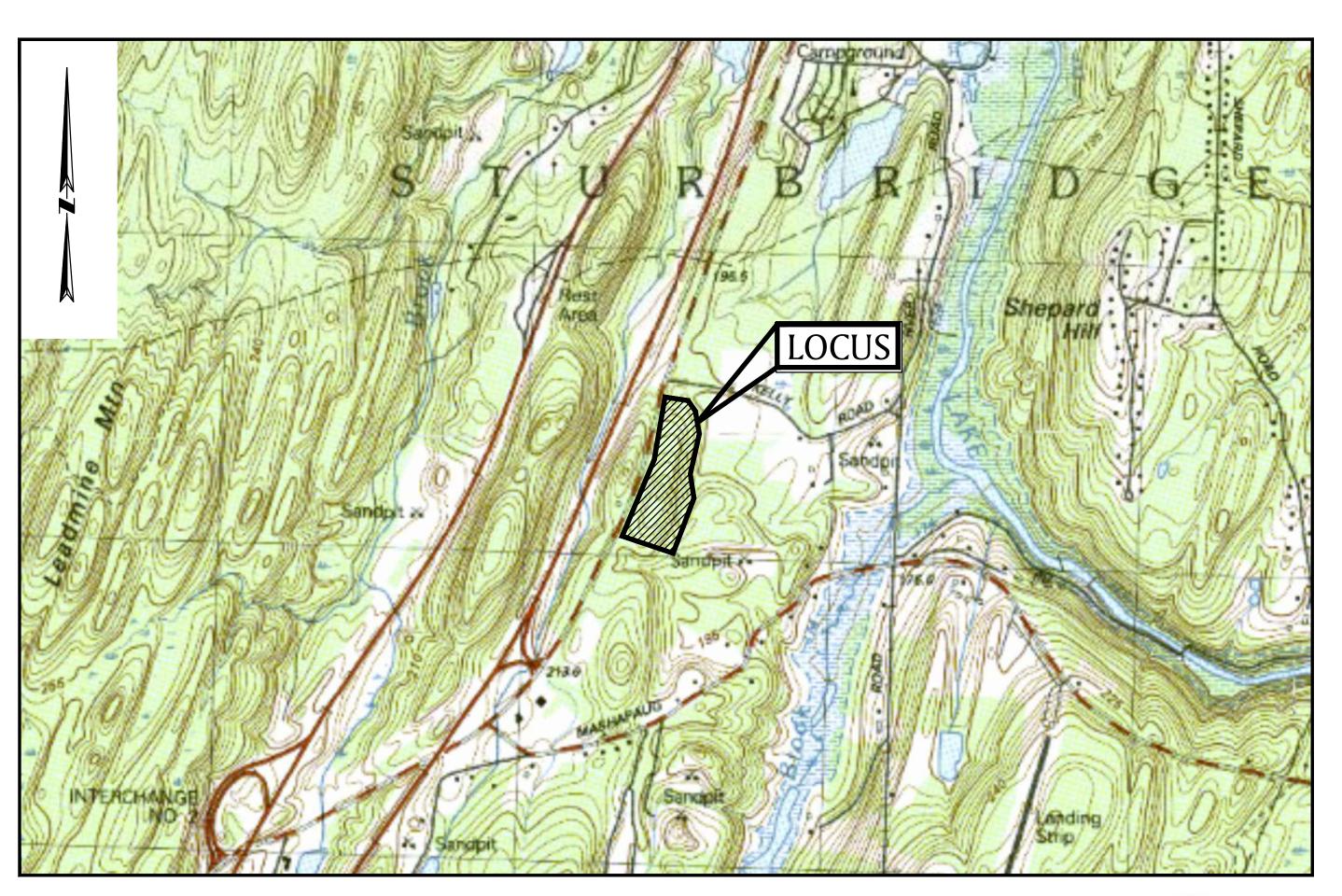
ZONING COMPLIANCE TABLE	-				
CRITERIA: ARTICLE XIV - INTENSITY REGULATIONS (§300-14.2, SPECIAL USE)					
	REQUIRED	PROPOSED			
MINIMUM LOT AREA	1 ACRE	13.92 ACRES			
MINIMUM LOT FRONTAGE	200'	1,619.5'±			
MINIMUM STREET SETBACK	50'	54.2'			
MINIMUM SIDE/REAR YARD SETBACK	30'	192.3'			
MAX. LOT COVERAGE (%)	30%	17.0%			
MAXIMUM HEIGHT	35'	N/A			
CRITERIA: ARTICLE X - SOLAR ENERGY FACILITIES (§300-10.1 - §300.10.12)					
	REQUIRED	PROPOSED			
MINIMUM FRONT/SIDE/REAR YARD SETBACK	100'	100.6			
MINIMUM RESIDENTIAL LANDSCAPED BUFFER	200'	200.0'			

PREPARED FOR:

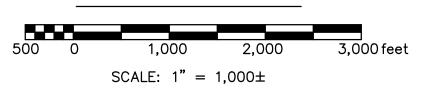
STURBRIDGE PV, LLC

2420 17TH STREET

DENVER, CO 80202



LOCUS MAP





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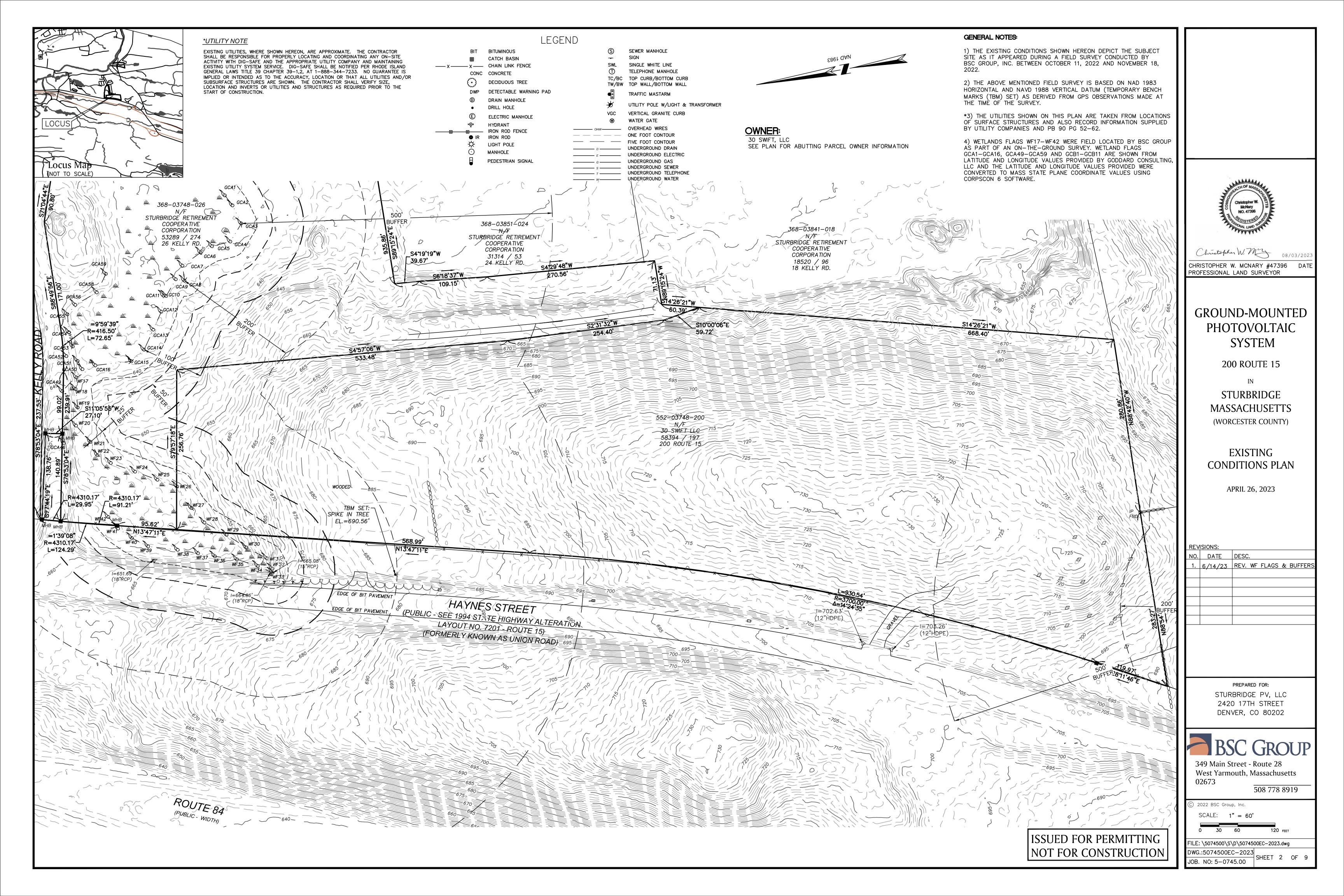
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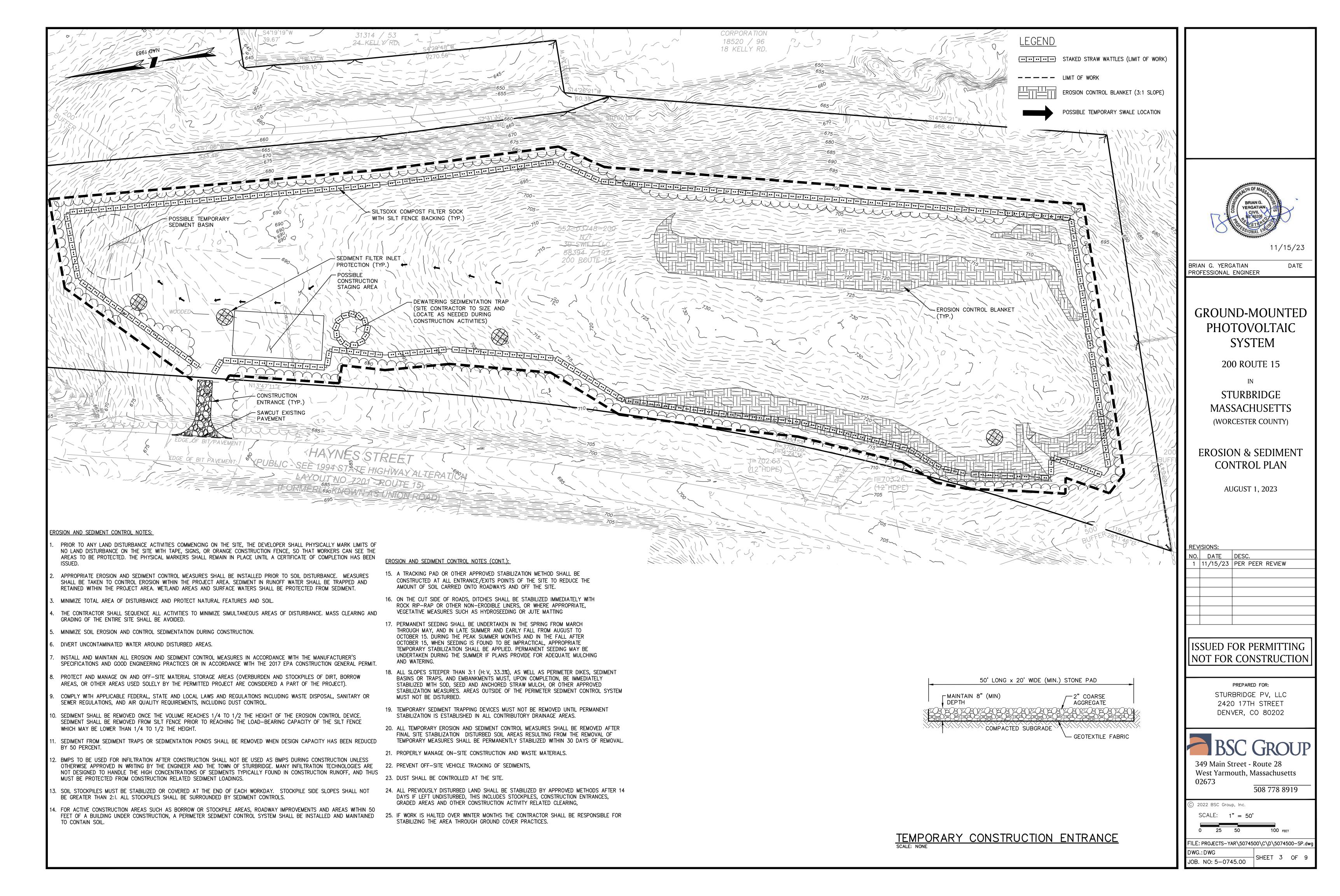


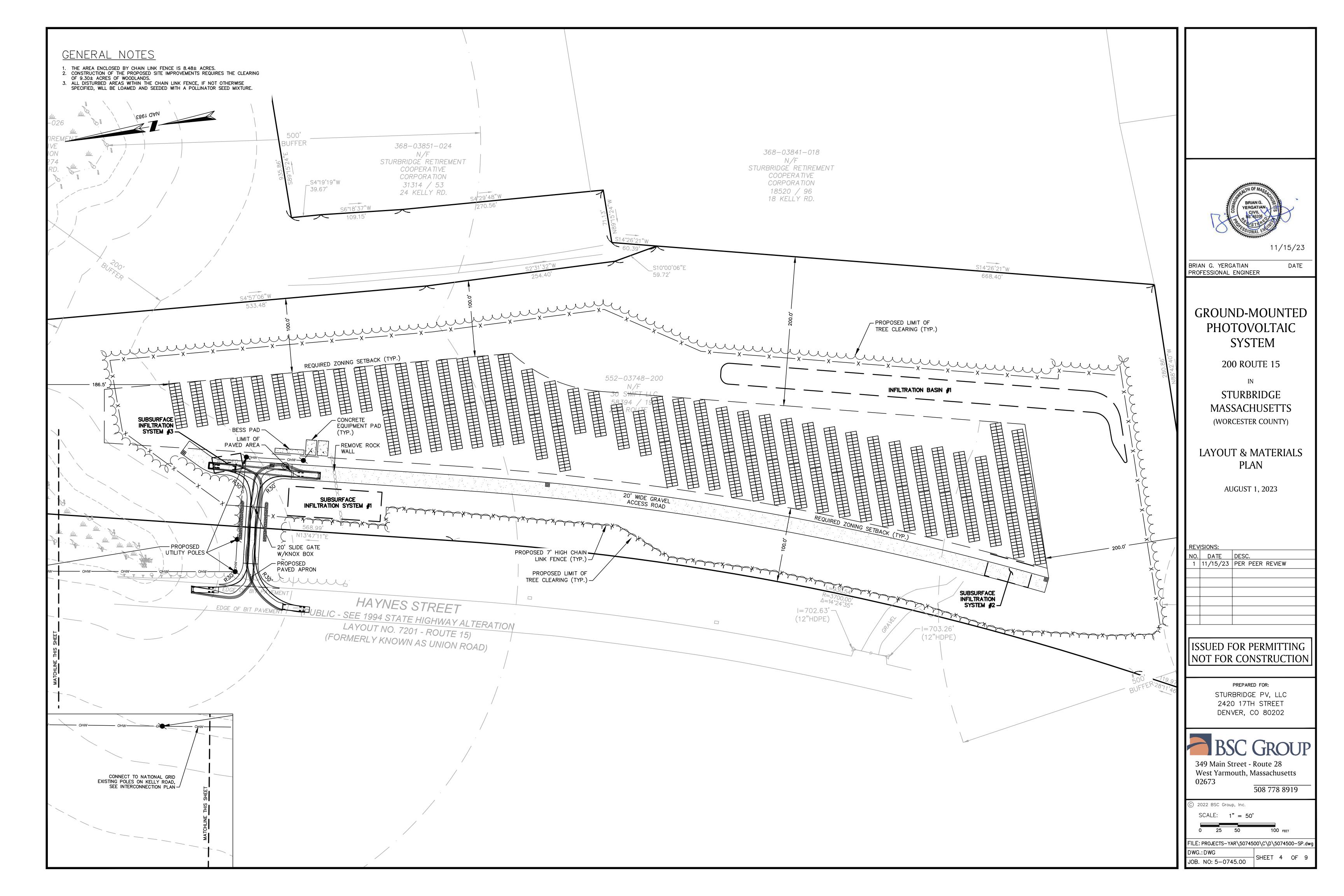
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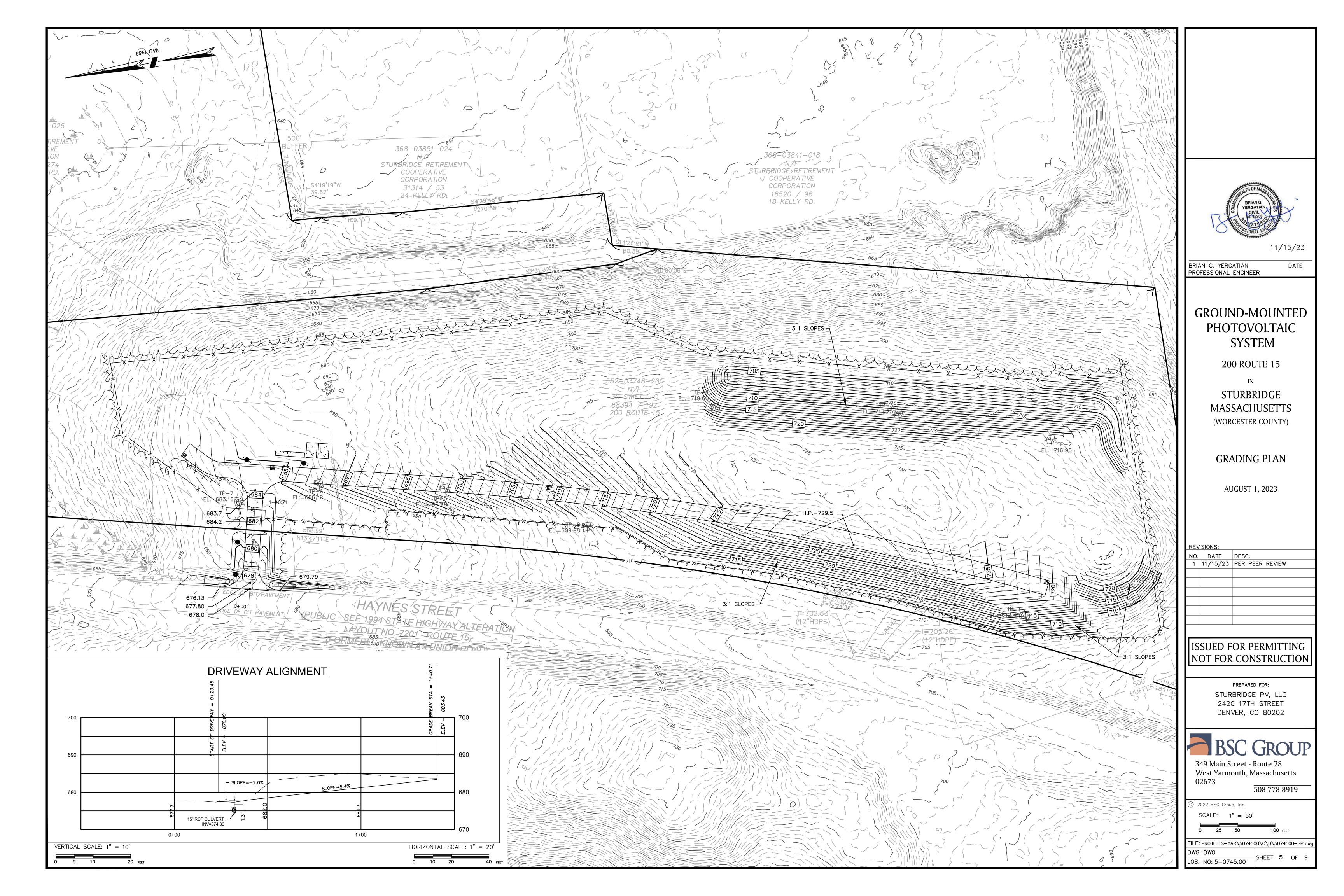
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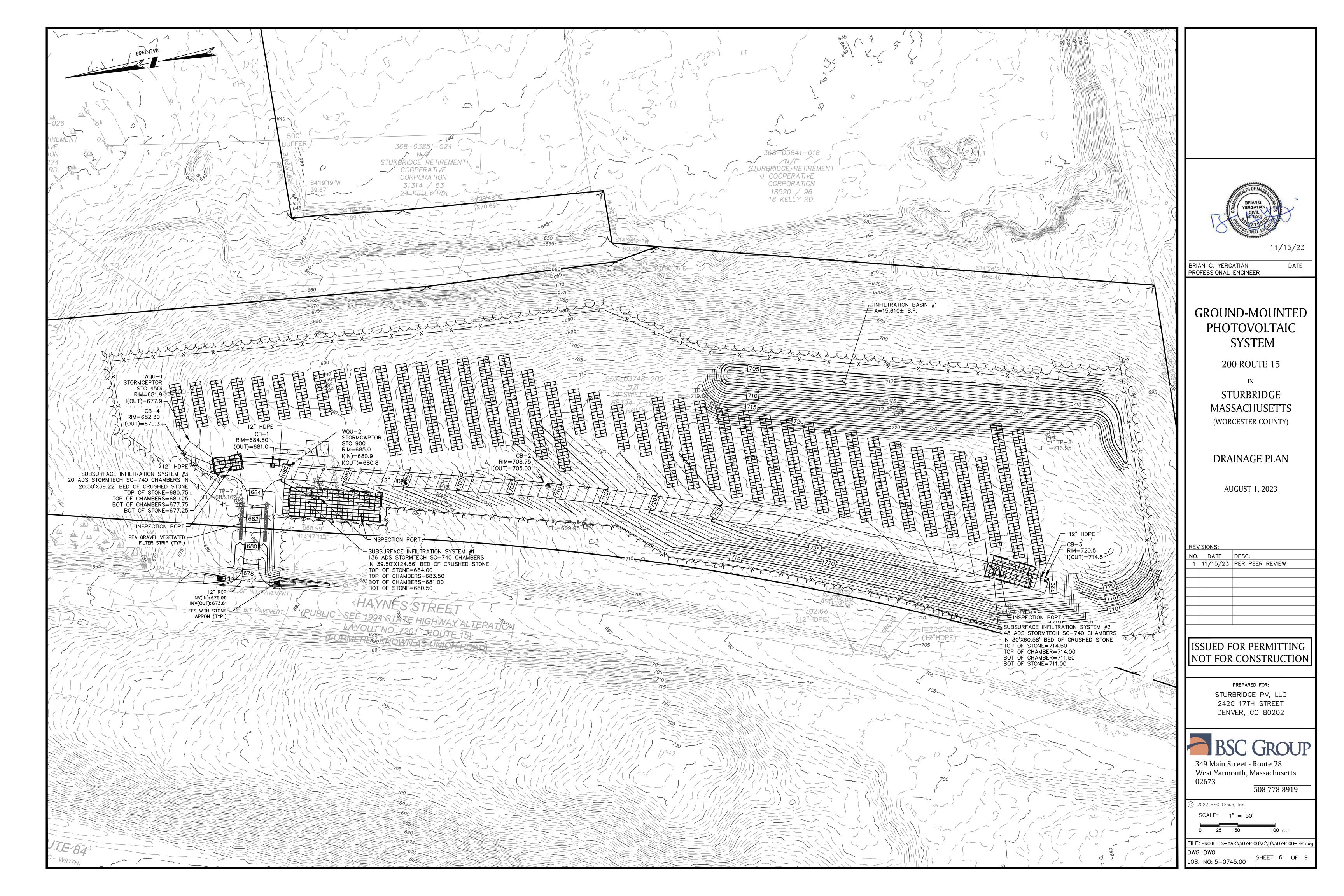
SHEET 1 OF 8

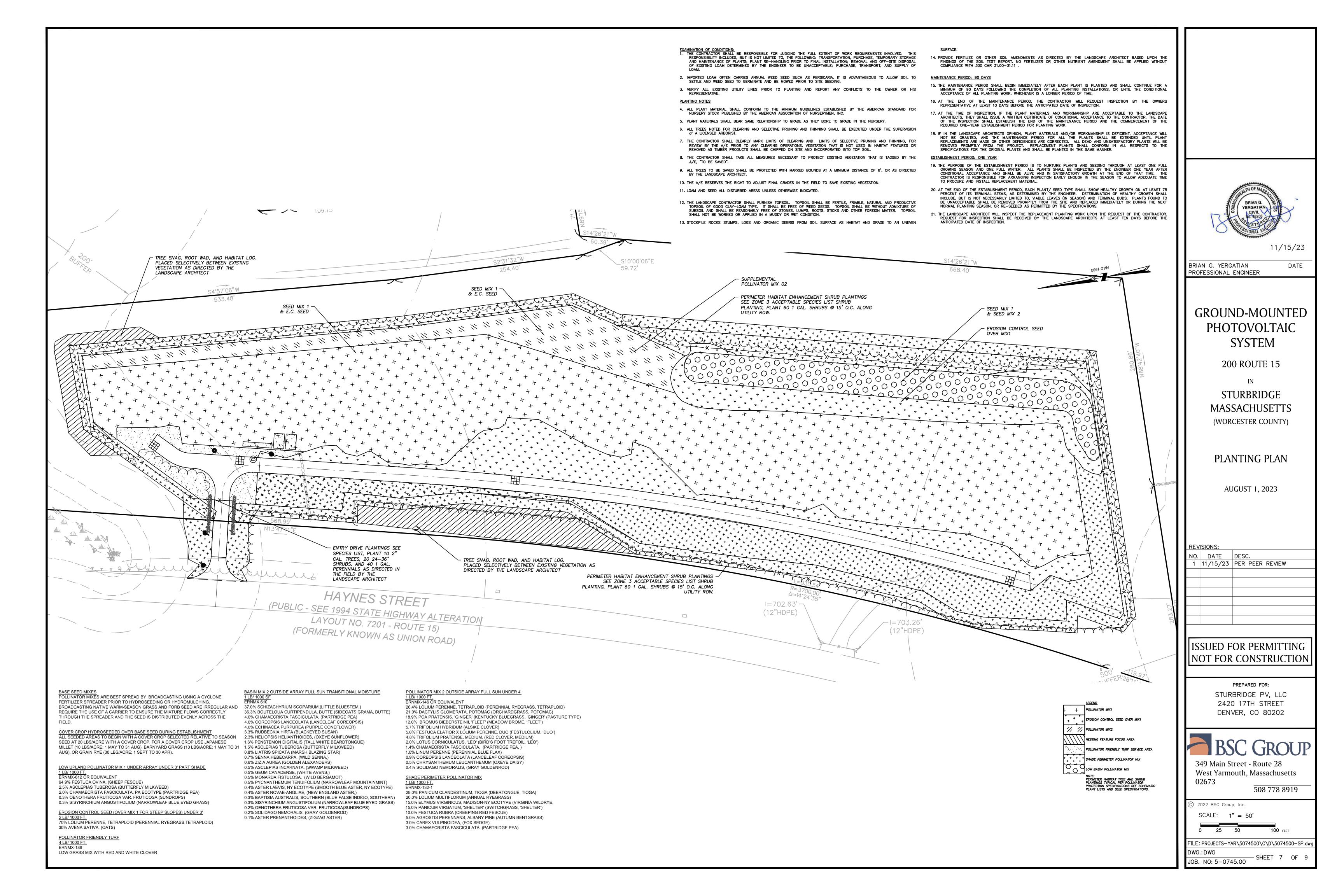








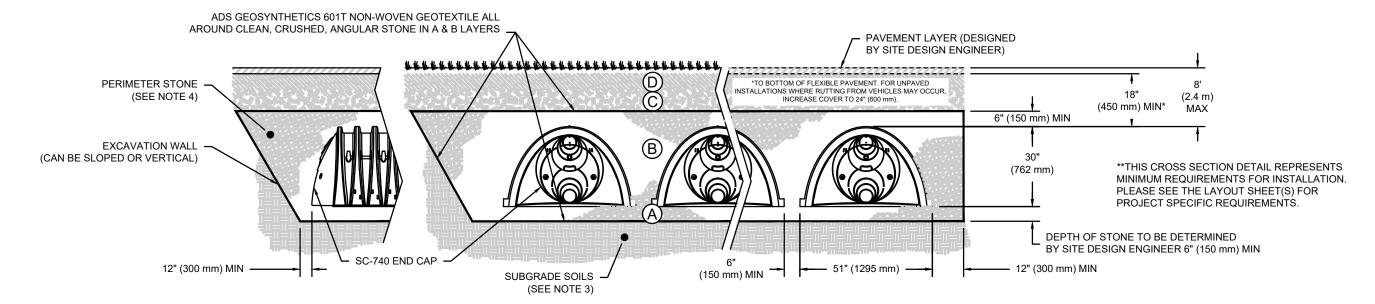




ACCEPTABLE FILL MATERIALS: STORMTECH SC-740 CHAMBER SYSTEMS AASHTO MATERIAL COMPACTION / DENSITY REQUIREMENT MATERIAL LOCATION **DESCRIPTION CLASSIFICATIONS** FINAL FILL: FILL MATERIAL FOR LAYER 'D' STARTS FROM THE PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS. PAVEMENT OR UNPAVED FINISHED GRADE ABOVE, NOTE THA PREPARATION REQUIREMENTS. PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER. BEGIN COMPACTIONS AFTER 12" (300 mm) OF MATERIAL OVER AASHTO M1451 GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN A-1, A-2-4, A-3 INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE 6" (150 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR PROCESSED AGGREGATE. TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 18" (450 mm) WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR ABOVE THE TOP OF THE CHAMBER, NOTE THAT PAVEMENT MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS PROCESSED AGGREGATE MATERIALS. ROLLER GROSS SUBBASE MAY BE A PART OF THE 'C' LAYER. AASHTO M43 VEHICLE WEIGHT NOT TO EXCEED 12,000 lbs (53 kN). DYNAMIO LAYER. 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10 FORCE NOT TO EXCEED 20,000 lbs (89 kN). EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS AASHTO M431 CLEAN, CRUSHED, ANGULAR STONE NO COMPACTION REQUIRED. 3, 357, 4, 467, 5, 56, 57 FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE AASHTO M431 CLEAN, CRUSHED, ANGULAR STONE PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE.2, SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER. 3, 357, 4, 467, 5, 56, 57

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"

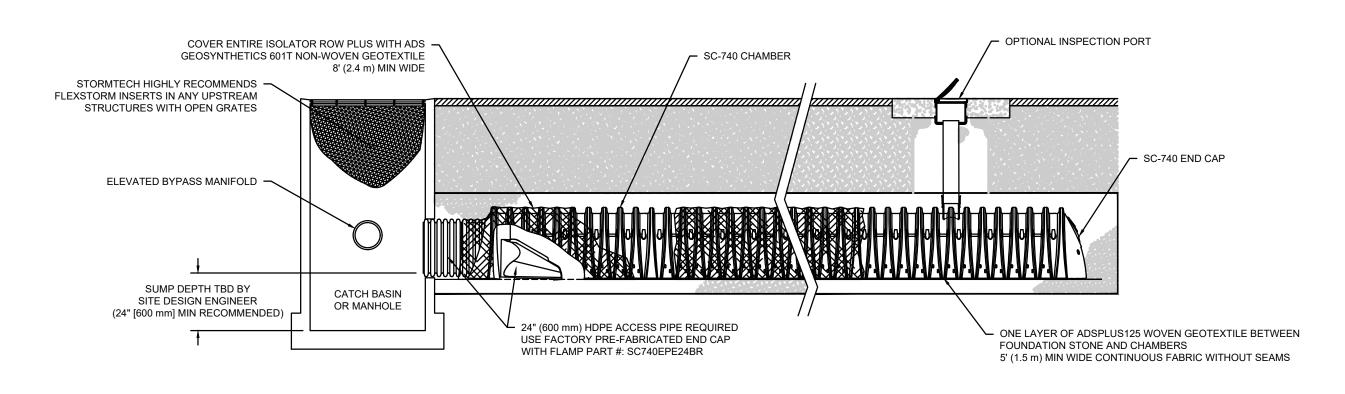
- STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6" (150 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGNS, CONTACT STORMTECH FOR
- ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.



NOTES:

- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418. "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS
- SC-740 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS
- PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS
- REQUIREMENTS FOR HANDLING AND INSTALLATION:
- TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
- TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 2".
- TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 550 LBS/FT/%. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.

SC-740 CROSS SECTION DETAIL

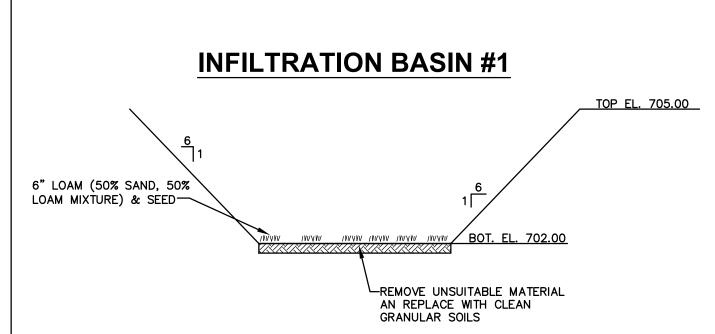


ISCLITAONSONANTORING PLANSTYNETIAM

- 12" (300 mm) MIN WIDTH CONCRETE COLLAR NOT REQUIRED FOR UNPAVED APPLICATIONS CONCRETE COLLAR 8" NYLOPLAST INSPECTION PORT PAVEMENT BODY (PART# 2708AG4IPKIT) OR TRAFFIC RATED BOX W/SOLID LOCKING COVER CONCRETE SLAB 6" (150 mm) MIN THICKNESS 4" (100 mm) INSERTA TEE TO BE CENTERED ON CORRUGATION CREST STORMTECH CHAMBER

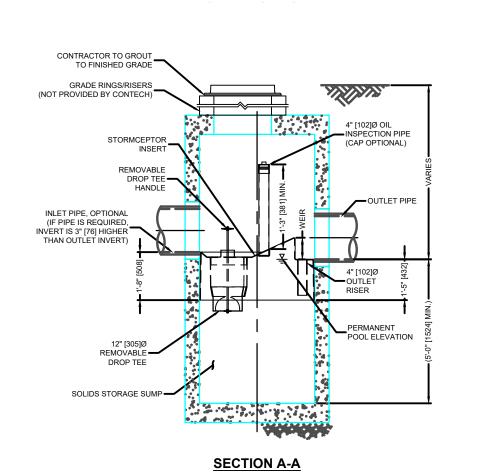
INSPECTION PORTS MAY BE CONNECTED THROUGH ANY CHAMBER CORRUGATION CREST.

HOT MIX ASPHALT PAVEMENT (SEE DETAIL) FG: 678.96 - INV: 675.87 12" RCP PIPE CULVERT scale: none



- 1. LIGHT EARTH MOVING EQUIPMENT IS TO BE USED DURING CONSTRUCTION TO REDUCE COMPACTION OF BASIN BOTTOM.
- 2. BASIN FLOOR IS TO BE DEEPLY TILLED AFTER FINAL GRADING.
- 3. PROPER EROSION SEDIMENT CONTROLS SHOULD BE UTILIZED DURING CONSTRUCTION TO PREVENT SEDIMENT AND/OR DEBRIS FROM ENTERING THE BASIN.
- 4. 75% OF RIP-RAP STONE SHALL BE 70 100 lbs.

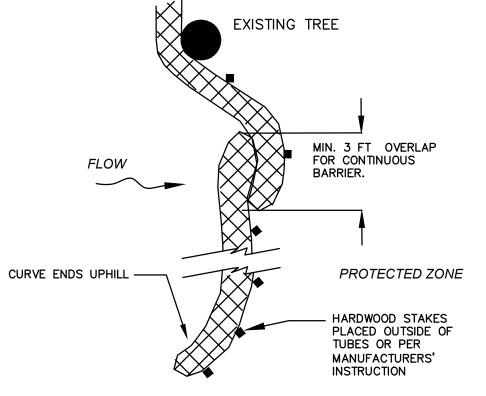
INFILTRATION BASIN CROSS-SECTION



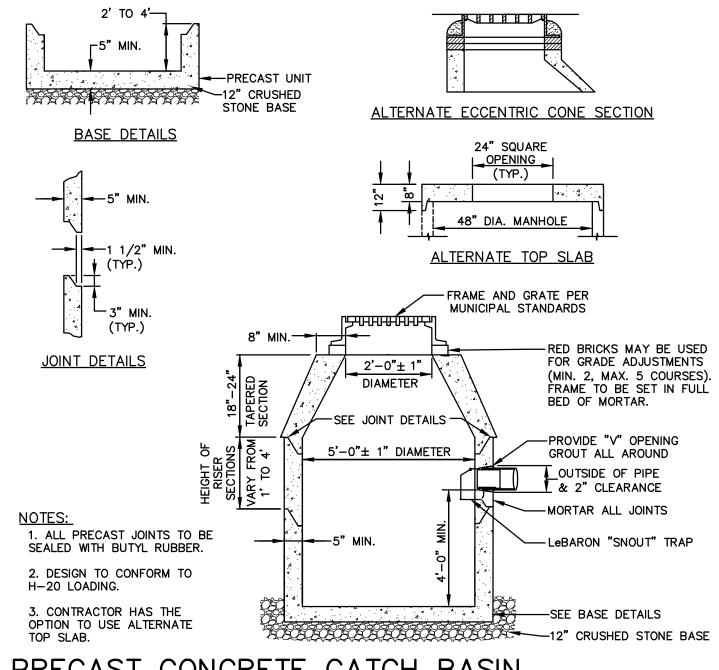
- 1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE. FOR SITE SPECIFIC DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.ContechES.com STORMCEPTOR WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS
- DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT. STORMCEPTOR STRUCTURE SHALL MEET AASHTO HS20 LOAD RATING ASSUMING FARTH COVER OF 0' - 2' [610] AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER
- ELEVATION. CASTINGS SHALL MEET AASHTO M306 AND BE CAST WITH THE CONTECH LOGO. STORMCEPTOR STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C478 AND AASHTO LOAD FACTOR DESIGN METHOD ALTERNATE UNITS ARE SHOWN IN MILLIMETERS [mm].

STORMCEPTOR STC 450i

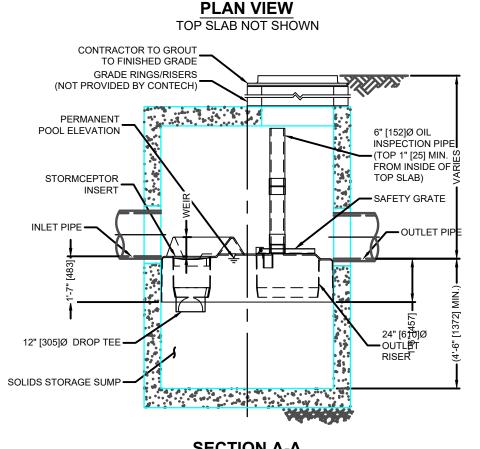
PLACE TUBE AS CLOSE TO LIMIT OF SOIL DISTURBANCE AS POSSIBLE, ALONG CONTOURS, AND PERPENDICULAR TO FLOW. ADJUST LOCATION AS REQUIRED FOR OPTIMUM EFFECTIVENESS. DO NOT INSTALL IN WATERWAYS.



PLAN VIEW



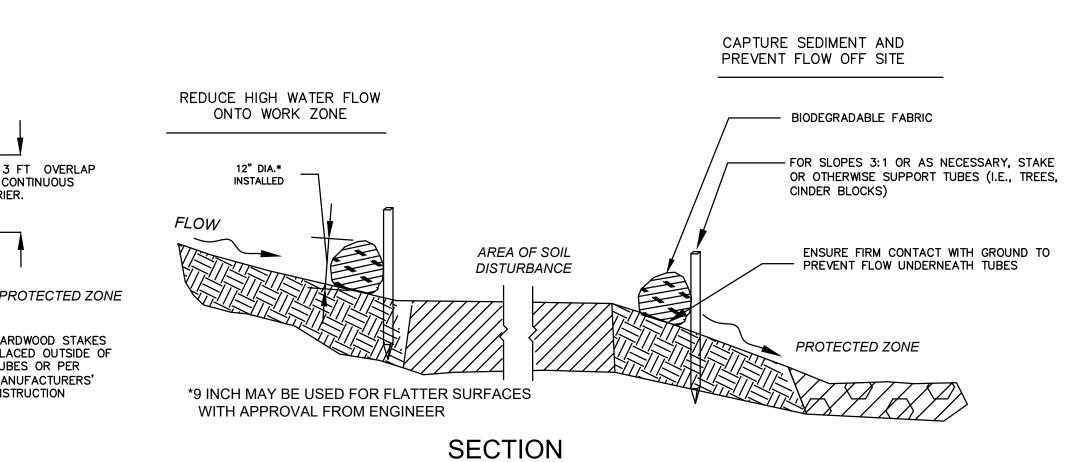
PRECAST CONCRETE CATCH BASIN



- GENERAL NOTES

 1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
- 2. FOR SITE SPECIFIC DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.ContechES.com
- 3. STORMCEPTOR WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT 4. STORMCEPTOR STRUCTURE SHALL MEET AASHTO HS20 LOAD RATING, ASSUMING EARTH COVER OF 0' - 2' [610], AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 AND BE CAST WITH THE CONTECH LOGO.
- STORMCEPTOR STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C478 AND AASHTO LOAD FACTOR DESIGN METHOD. 6. ALTERNATE UNITS ARE SHOWN IN MILLIMETERS [mm].

STORMCEPTOR STC 900



SILTSOXX COMPOST FILTER SOCK WITH SILT FENCE BACKING

AUGUST 1, 2023

BRIAN G. YERGATIAN

PROFESSIONAL ENGINEER

GROUND-MOUNTED

PHOTOVOLTAIC

SYSTEM

200 ROUTE 15

STURBRIDGE

MASSACHUSETTS

(WORCESTER COUNTY)

DETAIL SHEET

11/15/23

DATE

NO. DATE DESC. 1 | 11/15/23 | PER PEER REVIEW

ISSUED FOR PERMITTING NOT FOR CONSTRUCTION

PREPARED FOR: STURBRIDGE PV, LLC 2420 17TH STREET

DENVER, CO 80202

349 Main Street - Route 28 West Yarmouth, Massachusetts 02673

508 778 8919

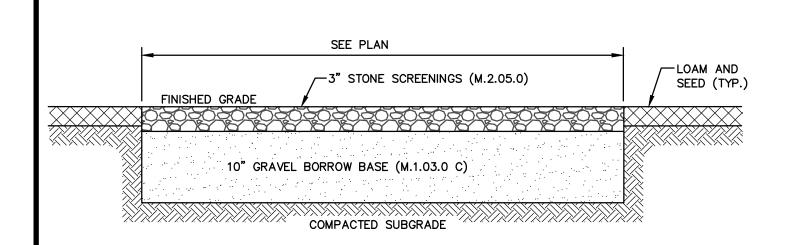
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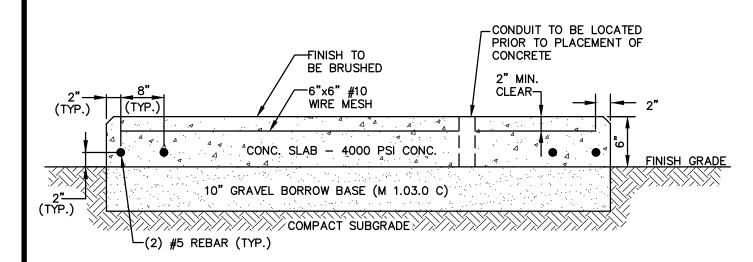
SHEET 8 OF 9 JOB. NO: 5-0745.00

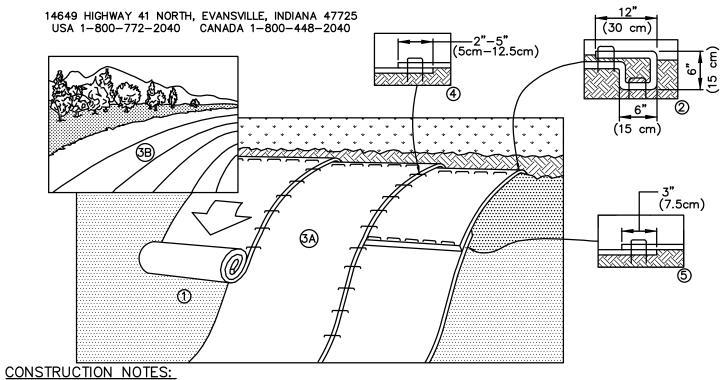
(SC SERIES CHAMBER)

A" PYCANSPECTION PORT DETAIL



GRAVEL DRIVEWAY SCALE: NONE





1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. HYDROSEED SIDE SLOPES BEFORE INSTALLATION OF BLANKETS.

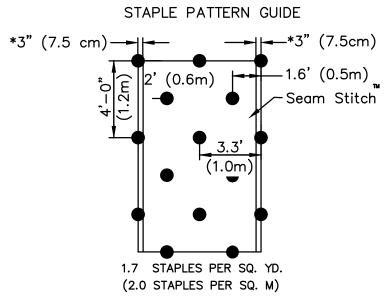
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" (15cm) DEEP X 6" (15cm) WIDE TRENCH WITH APPROXIMATELY 12" (30cm) OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30cm) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30cm) PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30cm) APART ACROSS THE WIDTH OF THE BLANKET.

3. ROLL THE BLANKETS (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING OPTIONAL DOT SYSTEM, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.

4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2"-5" (5cm-12.5cm) OVERLAP DEPENDING ON BLANKET TYPE. TO ENSURE PROPER SEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING INSTALLED ON TOP) EVEN WITH THE COLORED SEAM STITCH ON THE PREVIOUSLY INSTALLED BLANKET.

5. CONSECUTIVE BLANKETS SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" (7.5cm) OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" (30cm) APART

14'-7"



BLANKETS WITH THE OPTIONAL NORTH AMERICAN GREEN DOT SYSTEM PLACE STAPLES/STAKES THROUGH EACH OF THE GREEN COLORED DOTS.

14'-4"

NON-REFLECTIVE

RE-SPREAD EXISTING TOPSOIL UNDER

AND AROUND AND BETWEEN PANELS

(IMPORT TOPSOIL AS NEEDED).

SOLAR PANELS

*IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15CM) MAY BE NECESSARY TO PROPERLY SECURE THE BLANKETS.

- A. OVERLAPS AND SEAMS B. PROJECTED WATER LINE

TILT BRACKET

C-CHANNEL

(TYP)

FINISH GRADE

FOUNDATION SYSTEM-

TO BE DETERMINED

LOWER SUPPORT

- C. CHANNEL BOTTOM/SIDE SLOPE VERTICES
- * HORIZONTAL STAPLE SPACING SHOULD BE ALTERED IF NECESSARY TO ALLOW
- STAPLES TO SECURE THE CRITICAL POINTS ALONG THE CHANNEL SURFACE.

** IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENTHS IN EXCESS

OF 6" (15 CM) MAY BE NECESSARY TO PROPERLY ANCHOR THE BLANKETS. *LOCATION OF SEAM STITCH WILL VARY DEPENDING ON NORTH AMERICAN GREEN PRODUCT TYPE: -APPROX. 5" SEAM OVERLAP FOR BIONET EROSION CONTROL BLANKETS

SLOPE STABILIZATION INSTALLATION

\DETAILS\LD\EROSION CONTROL\SLOPE STABILIZATION INSTALLATION.DWG

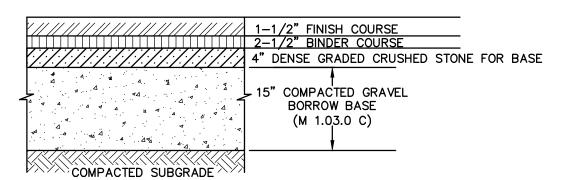
STEEL Z-RAIL

14'-7"

GRADE -

- MODULE

TRANSFORMER PAD



STANDARD DUTY FLEXIBLE PAVEMENT

PAVEMENT SECTIONS ARE SUBJECT TO CHANGE AND MAY BE BASED ON THE RESULTS OF GEOTECHNICAL INVESTIGATIONS

CHAIN LINK FENCE FRAMEWORK SCHEDULE

CHAIN LINK FENCE
SCALE: NONE

FABRIC HEIGHT

LINE POST

END, CORNER & PULL POST

TOP AND BOTTOM RAIL

HOT MIX ASPHALT PAVEMENT SECTIONS

6' OR LESS 6' - 10' 10' OR MORE

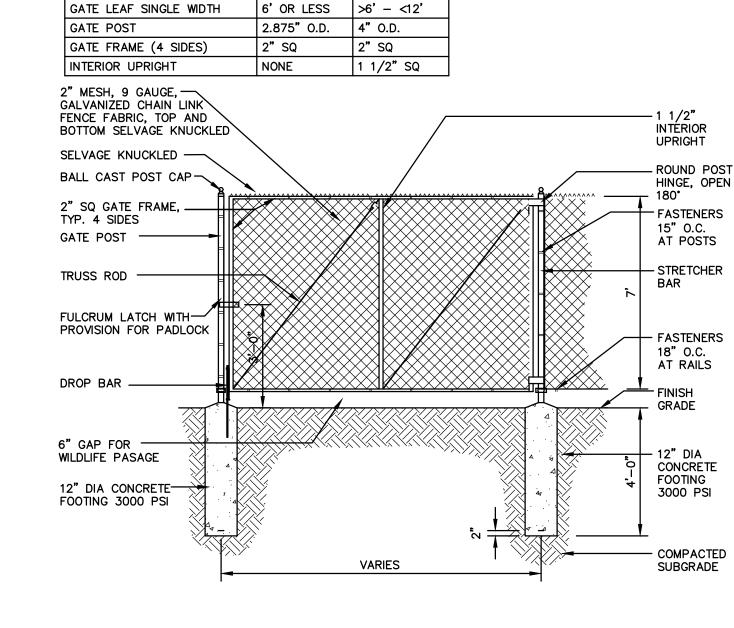
1.900" O.D. | 2.375" O.D. | 2.875" O.D.

1.660" O.D. | 1.660" O.D. | 1.660" O.D.

2.375" O.D. 2.875" O.D. 4" O.D.

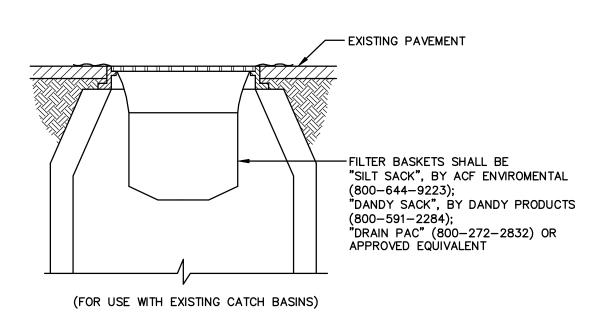
SELVAGE KNUCKLED BALL CAST POST CAP TOP RAIL STRETCHER BAR					— FASTENERS 18" O.C. AT ALL HORIZONTAL RAILS
BALL CAST POST CAP TOP RAIL STRETCHER BAR			······································		18" O.C. AT ALL HORIZONTAL
BALL CAST POST CAP TOP RAIL STRETCHER BAR				<u></u>	AT ALL HORIZONTAL
BALL CAST POST CAP TOP RAIL STRETCHER BAR		<u></u>		<u> </u>	HORIZONTAL
TOP RAIL STRETCHER BAR		<u></u>	·····	<u> </u>	
STRETCHER BAR					= =
STRETCHER BAR	******		^ ^ X X X X X X X X X X X X X X X X X X	7 11×××××	-
	^ ^ ^ ^ ^ ^ ^ ^ /				
STRETCHER BAR BANDS — 🗕 📉					T FASTENERS 15" O.C.
12" O.C.	>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>				AT POSTS
TRUSS ROD —				3 XXXX	
END POST					
H×					
2" MESH, 9 GAUGE, ————————————————————————————————————		***********			
LINK FENCE FABRIC, $\parallel \parallel \parallel$					
TOP AND BOTTOM SELVAGE KNUCKLED					FINISH GRADE - 6" GAP BETWE
SEEVAGE KINGOKEED		<u> </u>			BOT. OF FENCE AND FINISH GRADE, FOR ANIMAL ACCESS
BOTTOM RAIL			X/X/X/X/X		- ····, · · · · · · · · · · · · · · ·
×					
12" DIA CONCRETE		// <i>///////////////////////////////////</i>			— 12" DIA
) in the second of the second					CONCRETE FOOTING
					3000 PSI
	4			! ' : ₄	

— COMPACTED



(TYP)

SECTION VIEW - TYPICAL PANEL/RACK ASSEMBLY



ANGLE MOUNT

NOTE:
FILTER BASKETS TO BE PLACED IN ALL CATCH BASINS IN THE VICINITY OF NEW CONSTRUCTION. CATCH BASINS ARE TO BE PROTECTED AS SHOWN, WITH MINIMUM WEEKLY MAINTENANCE, OR AS REQUIRED AND REPLACED IF NECESSARY

CHAIN LINK FENCE GATE SCALE: NONE

CHAIN LINK GATE FRAMEWORK SCHEDULE

SEDIMENT FILTER INLET PROTECTION



11/15/23

DATE

BRIAN G. YERGATIAN PROFESSIONAL ENGINEER

GROUND-MOUNTED PHOTOVOLTAIC **SYSTEM**

200 ROUTE 15

STURBRIDGE **MASSACHUSETTS** (WORCESTER COUNTY)

DETAIL SHEET II

AUGUST 1, 2023

REV	REVISIONS:				
NO.	DATE	DESC.			
1	11/15/23	PER PEER REVIEW			

ISSUED FOR PERMITTING NOT FOR CONSTRUCTION

PREPARED FOR:

STURBRIDGE PV, LLC 2420 17TH STREET DENVER, CO 80202



349 Main Street - Route 28 West Yarmouth, Massachusetts

508 778 8919

SCALE: NOT TO SCALE

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