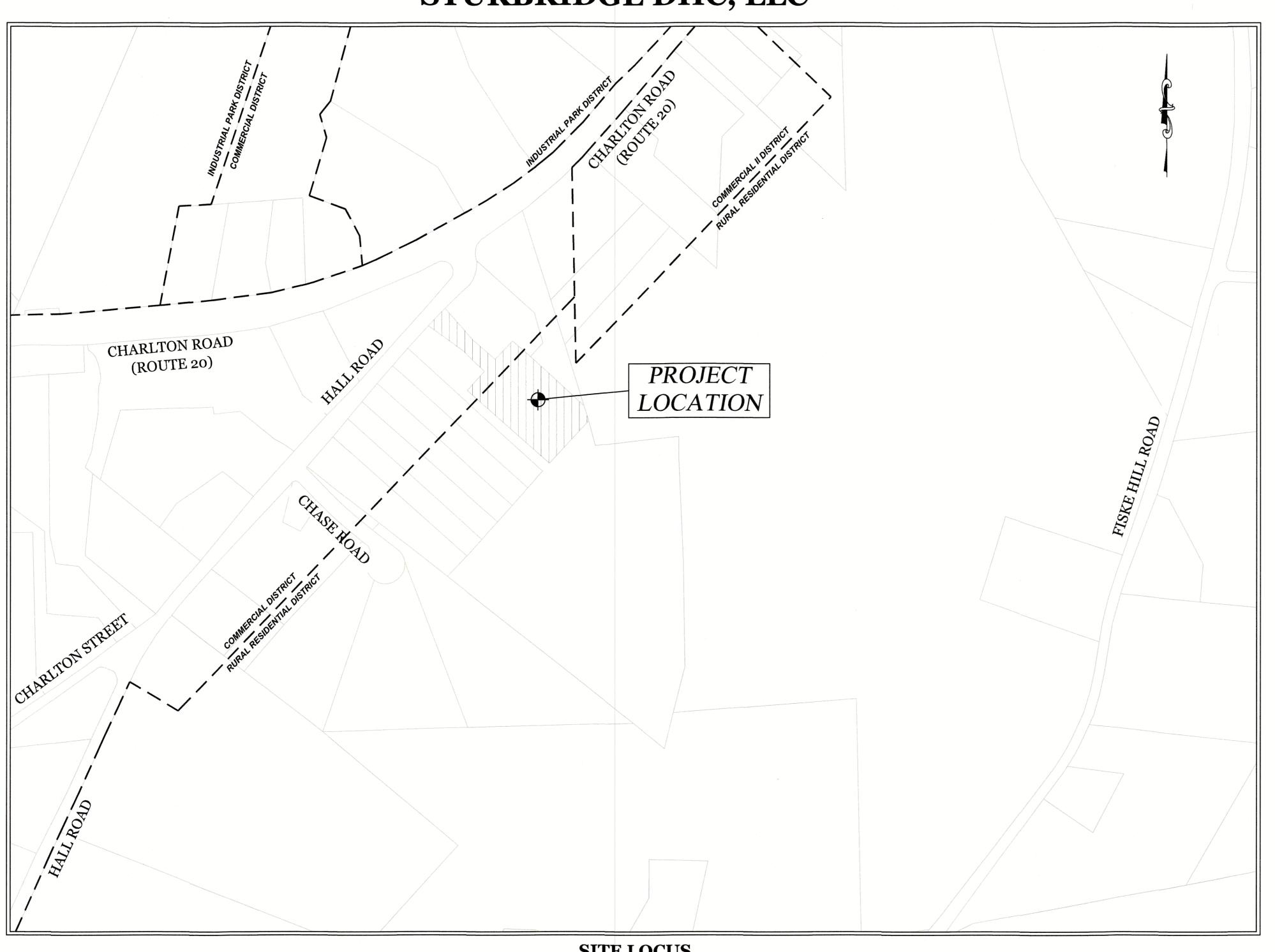
CULVERT MODIFICATION PLAN STURBRIDGE MEADOWS

92 & 94 HALL ROAD STURBRIDGE, MA 01566
PREPARED FOR STURBRIDGE DHC, LLC



SITE LOCUS

C-3

APPLICANT / PROPERTY INFORMATION:

APPLICANT: STURBRIDGE DHC, LLC MS. JESSE ALBERT 20 CORPORATE WOODS BLVD. ALBANY, NY 12211

OWNER: STURBRIDGE DHC, LLC MS. JESSE ALBERT, OWNER

ASSESSORS ID: 315-02631-092 & 315-02631-094 DEED REFERENCE: WORCESTER COUNTY REGISTRY OF DEEDS

> DEED BOOK 44691 PAGE 0090 PLAN BOOK 526 PAGE 120 PLAN BOOK 603 PAGE 66

PROJECT ENGINEER: CHRISTOPHER P. McCLURE, P.E. 119 WORCESTER ROAD CHARLTON, MA 01507 PHONE: (508)-248-2005

PROJECT SURVEYOR: MARK LAPRAD, P.L.S. MCCLURE ENGINEERING, INC. 119 WORCESTER ROAD CHARLTON, MA 01507 PHONE: (508)-248-2005

PHONE: (508) 752-9666

PROJECT ENVIRONMENTAL CONSULTANT: SCOTT M. MORRISON, PWS ECOTEC, INC. 102 GROVE STREET WORCESTER, MA 01605

GENERAL NOTES:

MAXIMUM COVERAGE:

1. THE BASE PLAN FOR THIS DESIGN WAS COMPILED FROM AN ON THE GROUND SURVEY CONDUCTED BY MCCLURE ENGINEERING ON DATE AND SUPPLEMENTED WITH TOPOGRAPHY TAKEN FROM 2013-2014 USGS LIDAR: POST SANDY (MA, NH, RI) TAKEN FROM NOAA ON LINE DATA ACCESS VIEWER.

2. ELEVATIONS REFERENCE THE NORTH AMERICAN VERTICAL DATUM OF 1988.

3. HORIZONTAL CONTROL IS BASED UPON THE NORTH AMERICAN DATUM OF 1983.

4. PROPERTY IS LOCATED WITHIN TWO DISTRICTS COMMERICAL AND RURAL RESIDENTIAL

COMMERICAL DISTRICT HAS THE FOLLOWING DIMENSIONAL REQUIREMENTS: MINIMUM LOT AREA: 43,560 S.F. MINIMUM LOT FRONTAGE: 150' FEET MINIMUM YARD SETBACKS (FRONT/SIDE/REAR): 25'/10'/10' MAXIMUM BUILDING HEIGHT: MAXIMUM STORIES: MAXIMUM COVERAGE: MAXIMUM IMPERVIOUS SURFACE

RURAL RESIDENTIAL DISTRICT HAS THE FOLLOWING DIMENSIONAL REQUIREMENTS: MINIMUM LOT AREA: MINIMUM LOT FRONTAGE: 150' FEET MINIMUM YARD SETBACKS (FRONT/SIDE/REAR): 30'/20'/20' MAXIMUM BUILDING HEIGHT: MAXIMUM STORIES:

5. PROPERTY DOES NOT LIE WITHIN THE SPECIAL FLOOD HAZARD AREA. FOR REFERENCE SEE THE NATIONAL FLOOD INSURANCE PROGRAM RATE MAP NO. 25027C0927F FOR COMMUNITY NO. 250337 AND DATED JUNE 21, 2023.

6. THIS PLAN IS PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT AND IS SUBJECT TO ANY MATTERS THAT SUCH A REPORT MAY DISCLOSE.

CHRISTOPHER F
McCLURE, P.E

DRAWN BY:	КР
DATE:	8/24/2023
CHK BY:	PE
SCALE:	1"=200'
PROJ. NO.	287-2585-M

TITLE SHEET

C-1

1" = 200'

DRAWING INDEX

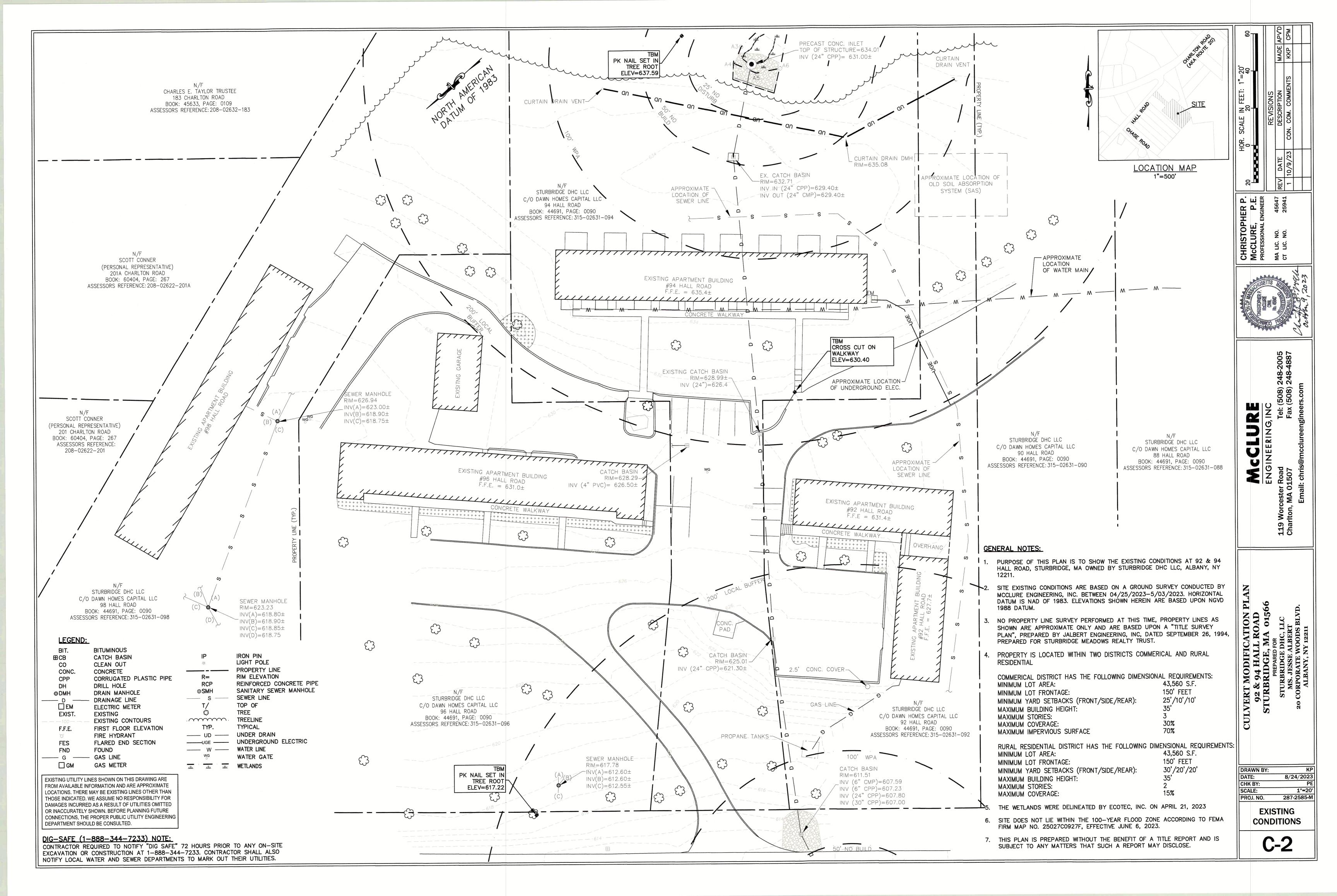
TITLE SHEET EXISTING CONDITIONS PLAN

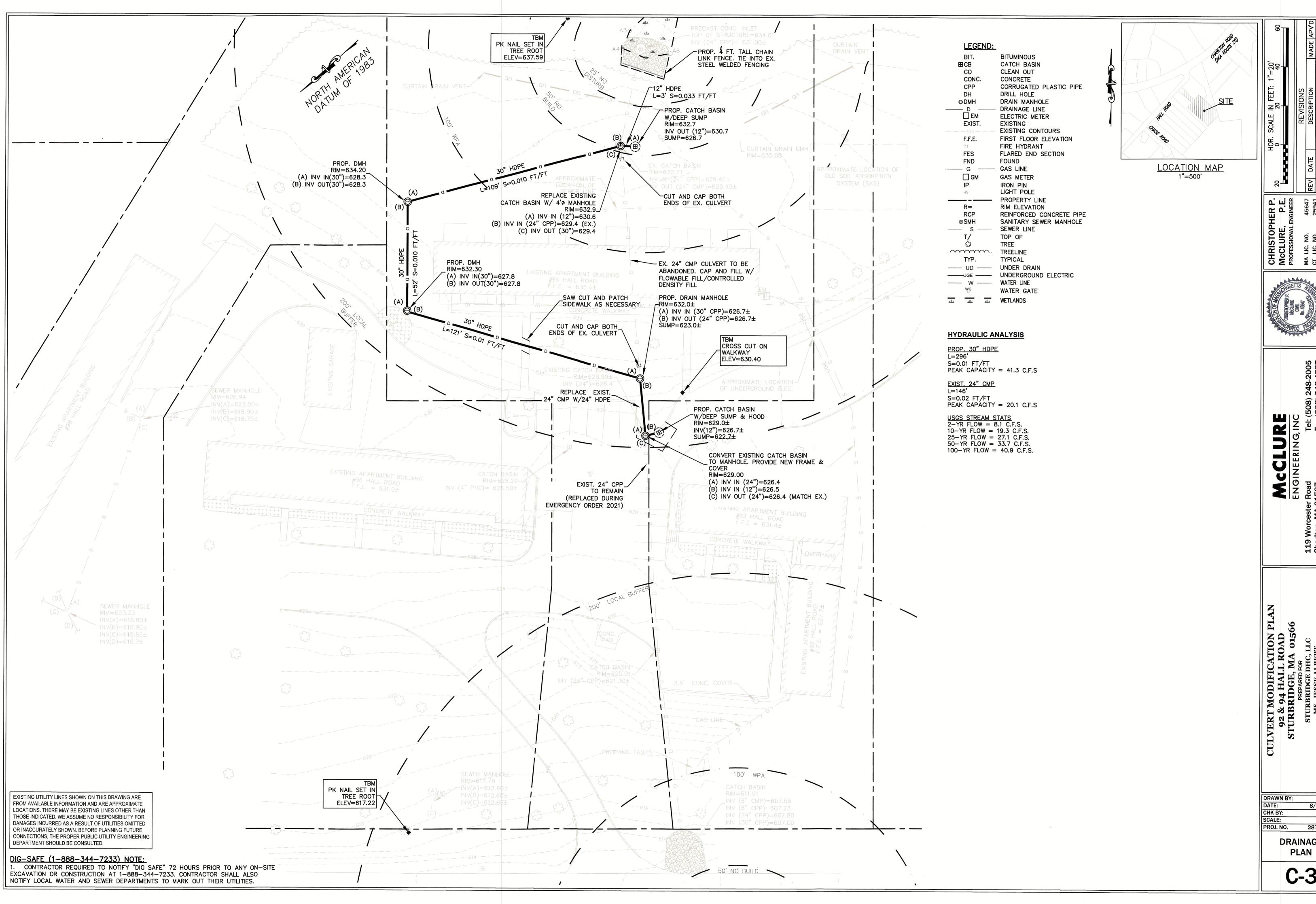
DRAINAGE PLAN

EROSION AND SEDIMENTATION CONTROL PLAN

CONSTRUCTION DETAILS

DIG-SAFE (1-888-344-7233) NOTE: CONTRACTOR REQUIRED TO NOTIFY "DIG SAFE" 72 HOURS PRIOR TO ANY ON-SITE EXCAVATION OR CONSTRUCTION AT 1-888-344-7233. CONTRACTOR SHALL ALSO NOTIFY LOCAL WATER AND SEWER DEPARTMENTS TO MARK OUT THEIR UTILITIES.





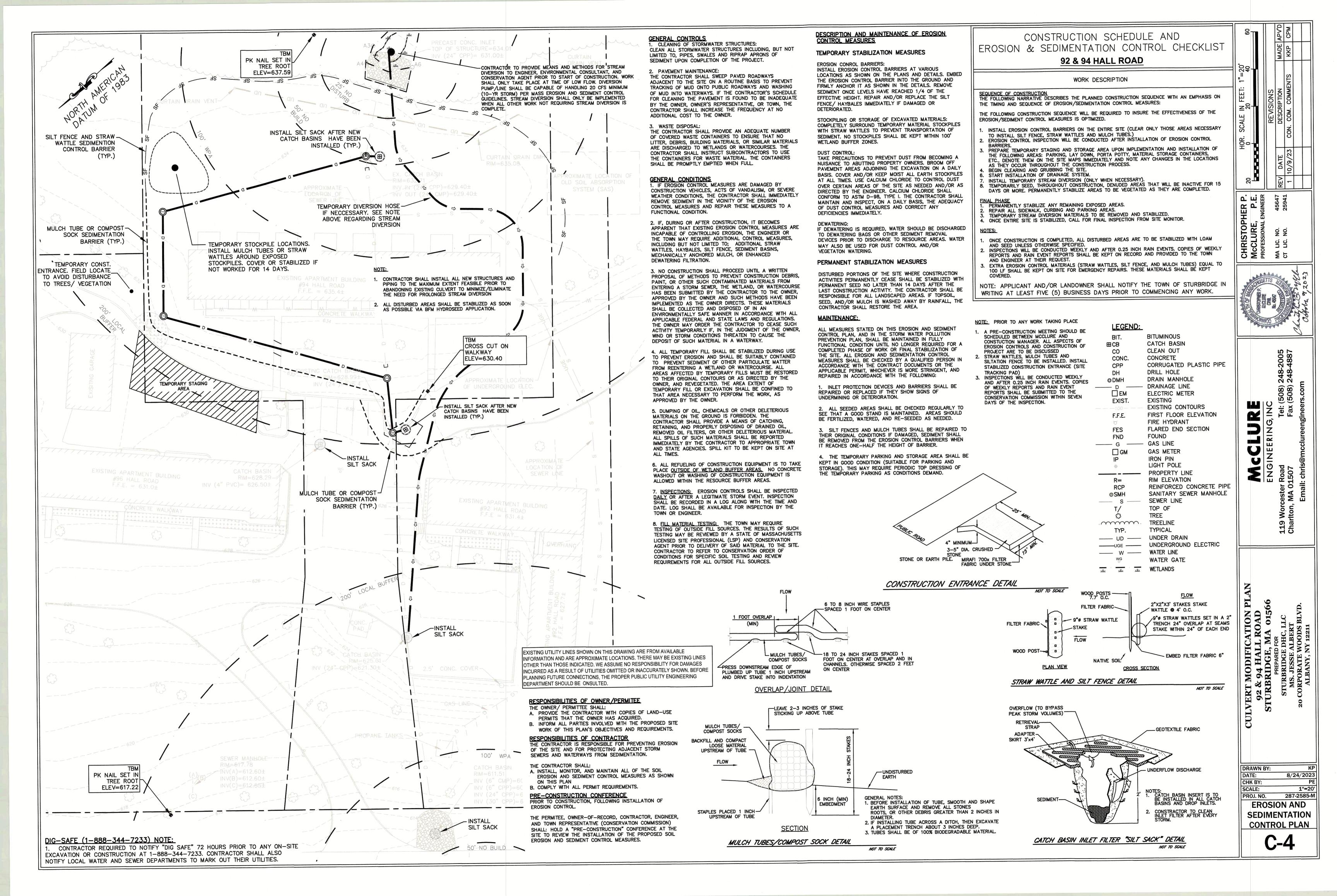
CHRISTOPHER F
McCLURE, P.E
PROFESSIONAL ENGINEE
MA LIC. NO. 4564
CT LIC. NO. 2594

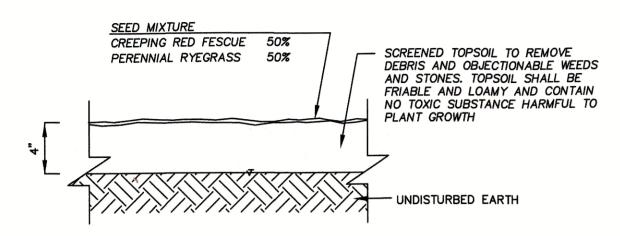
119 Worcester F Charlton, MA 01

8/24/2023 1"=20' 287-2585-M

DRAINAGE

C-3

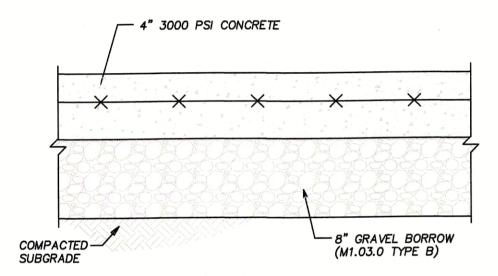




LOAM & SEED DETAIL

NOT TO SCALE

A FOUR-INCH-THICK CLASS A (3,000) PSI CONCRETE SHALL BE APPLIED TO THE PREPARED GRAVEL BASE. THE SLUMP SHALL VARY BETWEEN TWO AND FOUR INCHES. THE CONCRETE SHALL BE A PLANT MIX, PLACED, FLOATED, TROWELED AND THEN FINISHED WITH A BROOM. CURING AND SEALING COMPOUND SHALL BE APPLIED. PREFORMED EXPANSION JOINTS SHALL BE INSTALLED EIGHTEEN (18) FEET ON CENTER. TROWELED JOINTS SHALL BE INSTALLED SIX (6) FEET ON CENTER. PLANT MIX DESIGN DATA AND DELIVERY SLIPS SHALL BE SUBMITTED FOR REVIEW. ALL CONSTRUCTION AND CONCRETE REPAIR (IF NECESSARY) SHALL BE IN ACCORDANCE WITH MASSACHUSETTS HIGHWAY DEPARTMENT STANDARDS.



CONCRETE SIDEWALK DETAIL

NOT TO SCALE

FRAME & COVER SHALL BE LEBARON FOUNDRY CATALOG NO. LK110 475 POUND (MIN.) UNIT WITH A DIAMOND PATTERN WITH "DRAIN" CAST IN 3" LETTERS ON THE COVER. ADJUST TO GRADE WITH RED SEWER STANDARD— PRECAST CONC. CONE SECTION BRICK 2 BRICKS MAX. PRECAST INTO WALL SECTION STANDARD ---PRECAST MANHOLE 4'-0" * PAINT THE OUTSIDE SURFACES OF— DRAIN MANHOLES WITH A BITUMINOUS ASPHALT COATING -STANDARD RISER SECTION PRECAST CONCRETE SECTIONS VULCANIZED BUTYL TO CONFORM TO ASTM C-478, RUBBER JOINT SEALANT CONCRETE OF 400 P.S.I. IN STEEL REBAR PER ASTM REQUIREMENTS MIN. 0.12 SQ. IN. STEEL PER VERTICAL FOOT, PLACED PER AASHTO DESIGNATION M199. NON SHRINK GROUT (TYP) 1 1/2" (MIN) MONOLITHIC PRECAST BASE SECTION -3/4" WASHED STONE TO TOP OF STRUCTURE (12" MIN. THICKNESS) SECTION A-A -3/4" WASHED STONE (6" MIN. DEPTH)

* FOR DRAIN PIPES GREATER THAN 24" DIAMETER SHALL HAVE A MINIMUM INSIDE DIAMETER OF FIVE FEET.

TYPICAL PRE-CAST DRAIN MANHOLE NOT TO SCALE

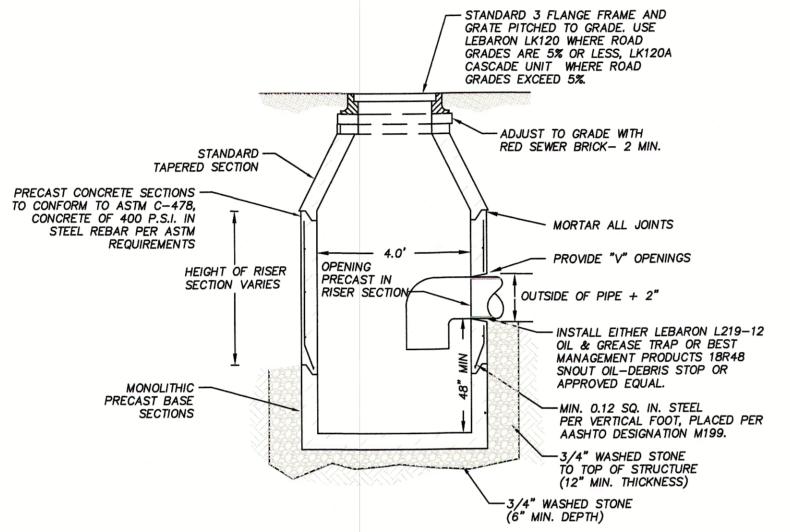
PRECAST STAINLESS STEEL STRAP CONCRETE STAINLESS MANHOLE STEEL STRAP PIPE SECTION STAINLESS STEEL RING EXPANDED IN PLACE RUBBER GASKET CAST FLEXIBLE SLEEVE CAST RUBBER SLEEVE IN MANHOLE BASE IN MANHOLE BASE **PRECAST** — CONCRETE MANHOLE PRECAST CONCRETE MANHOLE

CONTRACTOR SHALL BE REQUIRED TO MAKE ALL PIPE PENETRATIONS WATER TIGHT.

THE PIPE TO MANHOLE CONNECTION SHALL BE A FLEXIBLE RUBBER PIPE SLEEVE EITHER CAST IN PRECAST MANHOLE SECTION OR HELD IN PLACE BY STAINLESS STEEL RINGS EXPANDED IN PLACE TO MEET

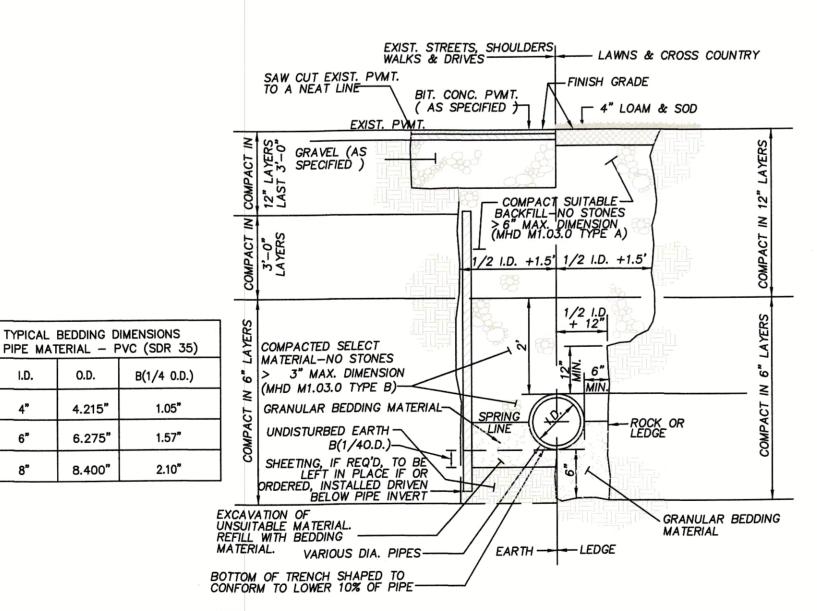
MANHOLE SEAL DETAILS

NOT TO SCALE



TYPICAL PRECAST CATCH BASIN DETAIL

NOT TO SCALE

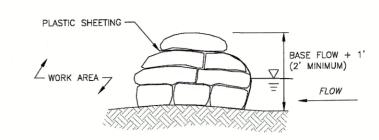


1. GRANULAR BEDDING MATERIAL SHALL CONSIST OF 3/4" CRUSHED STONE (MHD M2.01.4) OR COMPACTED GRAVEL BORROW (MHD M1.03.0 TYPE C)

2. TRENCH BEDDING & BACKFILL FOR SANITARY SEWERS SHALL BE CLASS B AS

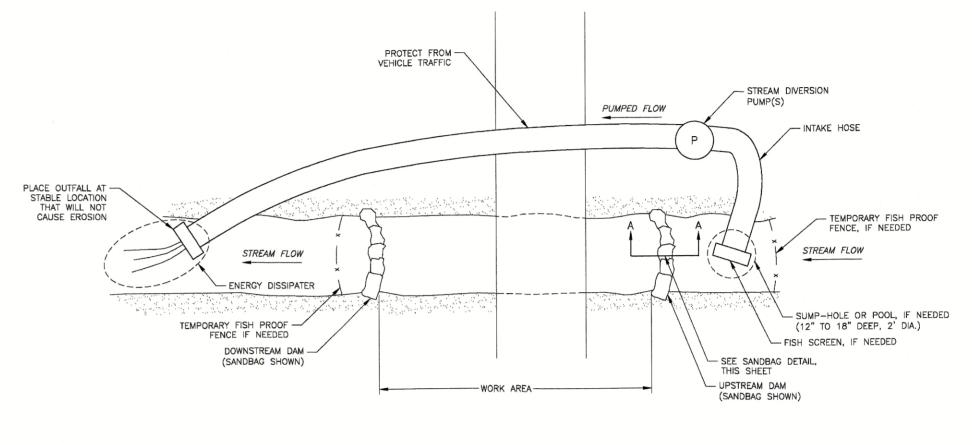
TYPICAL DRAINAGE TRENCH DETAIL

NOT TO SCALE



SECTION A-A

SANDBAG DAM NOT TO SCALE



<u>PLAN</u>

PUMPED STREAM DIVERSION DETAIL

PUMPED STREAM DIVERSION NOTES: DAM MATERIAL: SANDBAGS COVERED WITH PLASTIC SHEETING (30 MIL OR 2 OR MORE LAYERS OF 10 MIL), RIPRAP, STEEL PIPE PLATE, SHEETPILE, INFLATABLE BLADDERS, OR EQUIVALENT.

<u>PUMP:</u> SIZED FOR DESIGN FLOW IN CONTRACT, WITH INTAKE LINE, FITTINGS, AND NOZZLES. ENERGY DISSIPATER: RIPRAP, SANDBAGS, T-BAR SPREADER, OR EQUIVALENT. FISH BARRIER: FENCE OR SCREEN, IF NEEDED.

SPILL PREVENTION BMPS.

COORDINATE WITH DEPARTMENT FOR INSTALLATION OF FISH FENCE, IF NEEDED.

2. INSTALL A CONVEYANCE, SUMP (IF NEEDED), AND INTAKE HOSE.

3. INSTALL THE UPSTREAM AND DOWNSTREAM DAM.

 PLACE THE PUMP IN AN AREA DESIGNED FOR ITS USE AND OPERATION WITH SPILL PREVENTION MEASURES. 5. INSTALL THE ENERGY DISSIPATER.

WHEN PUMPING, MONITOR PUMPS, INTAKE AND DISCHARGE POINTS. ENSURE THAT PUMPS ARE ADEQUATELY SIZED.

INSPECT UPSTREAM AND DOWNSTREAM DAMS FOR OVERTOPPING, BYPASS, UNDERCUTTING, OR OTHER DEFECTS.

INSPECT THE CONVEYANCE STRUCTURE FOR LEAKS, EROSION, OR OTHER DEFECTS.

INSPECT DISCHARGE POINT FOR EROSION OR FAILURE OF THE ENERGY DISSIPATION MATERIAL.

INSPECT THE EQUIPMENT AREA FOR PROPERLY STORED FUEL AND OTHER POTENTIALLY HAZARDOUS SUBSTANCES.

REINFORCE OR RESTORE ANY PORTION OF THE DAMS,
 CONVEYANCE STRUCTURE, OR ENERGY DISSIPATER.

ENSURE STREAM BANKS AND SUMP ARE STABLE BEFORE
REMOVAL

2. REMOVE THE DOWNSTREAM DAM FIRST, THEN THE

3. REMOVE THE ENERGY DISSIPATER.

4. REMOVE THE INTAKE HOSE.

REMOVE THE TEMPORARY CONVEYANCE STRUCTURE. BACKFILL OR REGRADE AND RESTORE TO ORIGINAL CONTOURS.

6. REGRADE AND SEED OR PERMANENTLY STABILIZE ALL DISTURBED AREAS.

248-248-

DRAWN BY: 8/24/2023 СНК ВҮ: AS NOTED SCALE: 287-2585-M PROJ. NO.

CONSTRUCTION **DETAILS**

C-5

