DEFINITIVE SITE PLAN OF LAND AT 49 UPLAND STREET

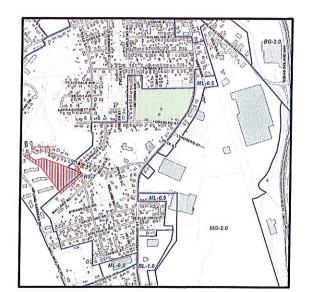
IN

WORCESTER, MASSACHUSETTS

OWNER & APPLICANT:

HENCHEY, LLC

5 EDGEMERE BOULEVARD SHREWSBURY, MASSACHUSETTS 01545



LOCUS MAP

CLIENT NUMBER: JOB NUMBER:

523 348-523

J48-523 UPLANDSTREETCURRENT.dwg

PREPARED BY

AZIMUTH LAND DESIGN, LLC

118 TURNPIKE ROAD, SUITE 200
SOUTHBOROUGH, MASSACHUSETTS 01772
TELEPHONE (508) 485-0137
EMAIL: jamest@azimuthlanddesign.co

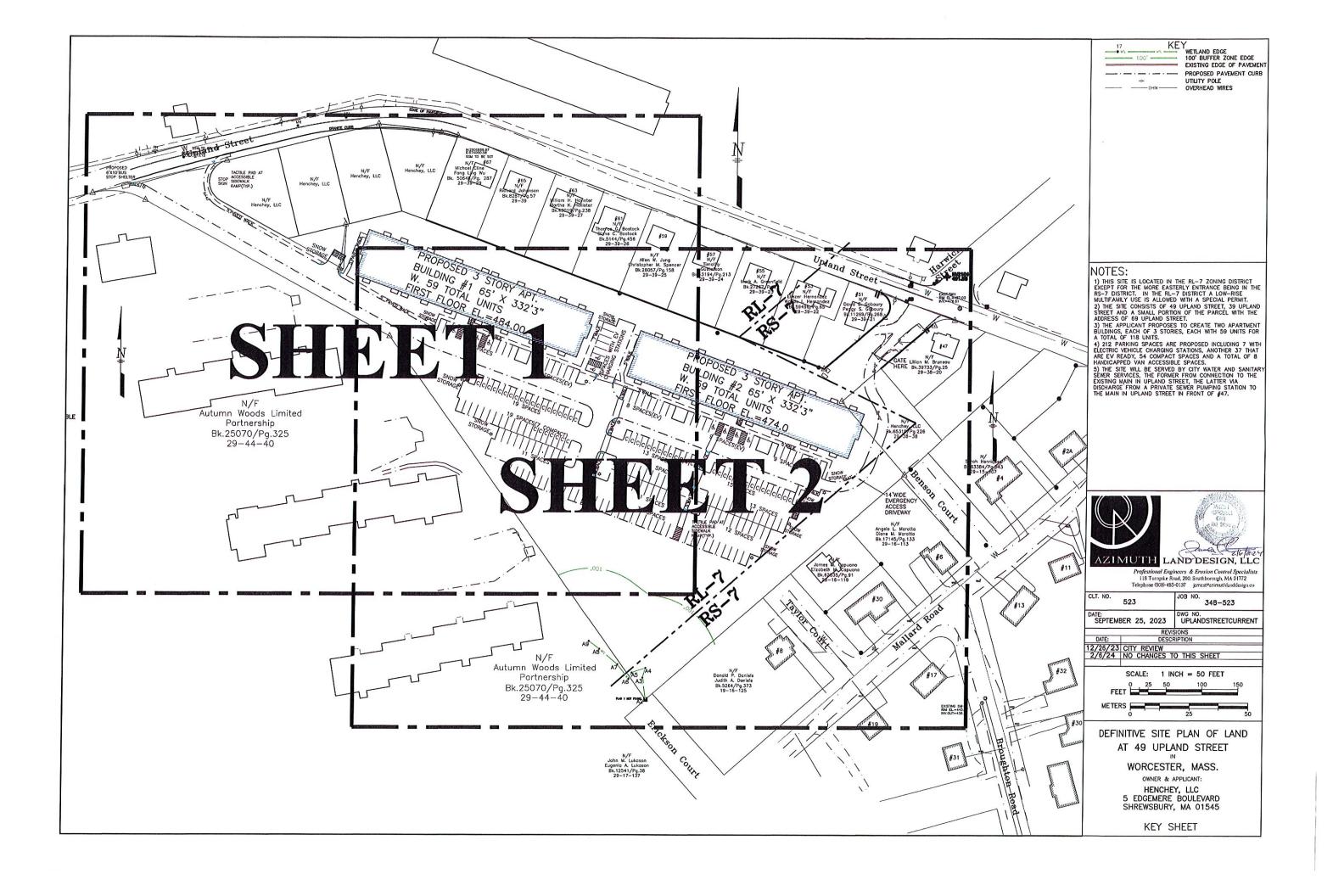
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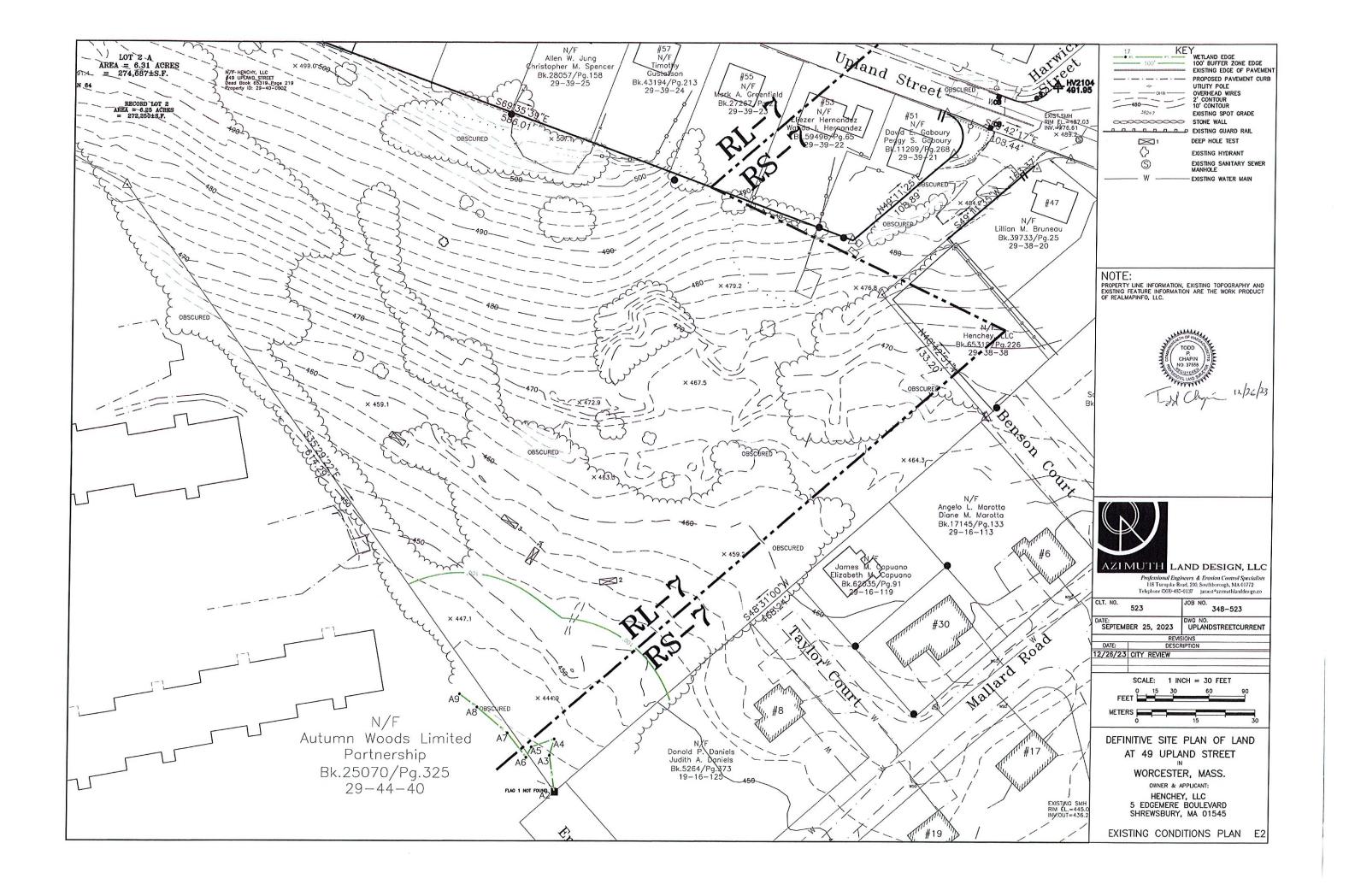
SEPTEMBER 25, 2023 REVISED DECEMBER 26, 2023 REVISED FEBRUARY 6, 2024

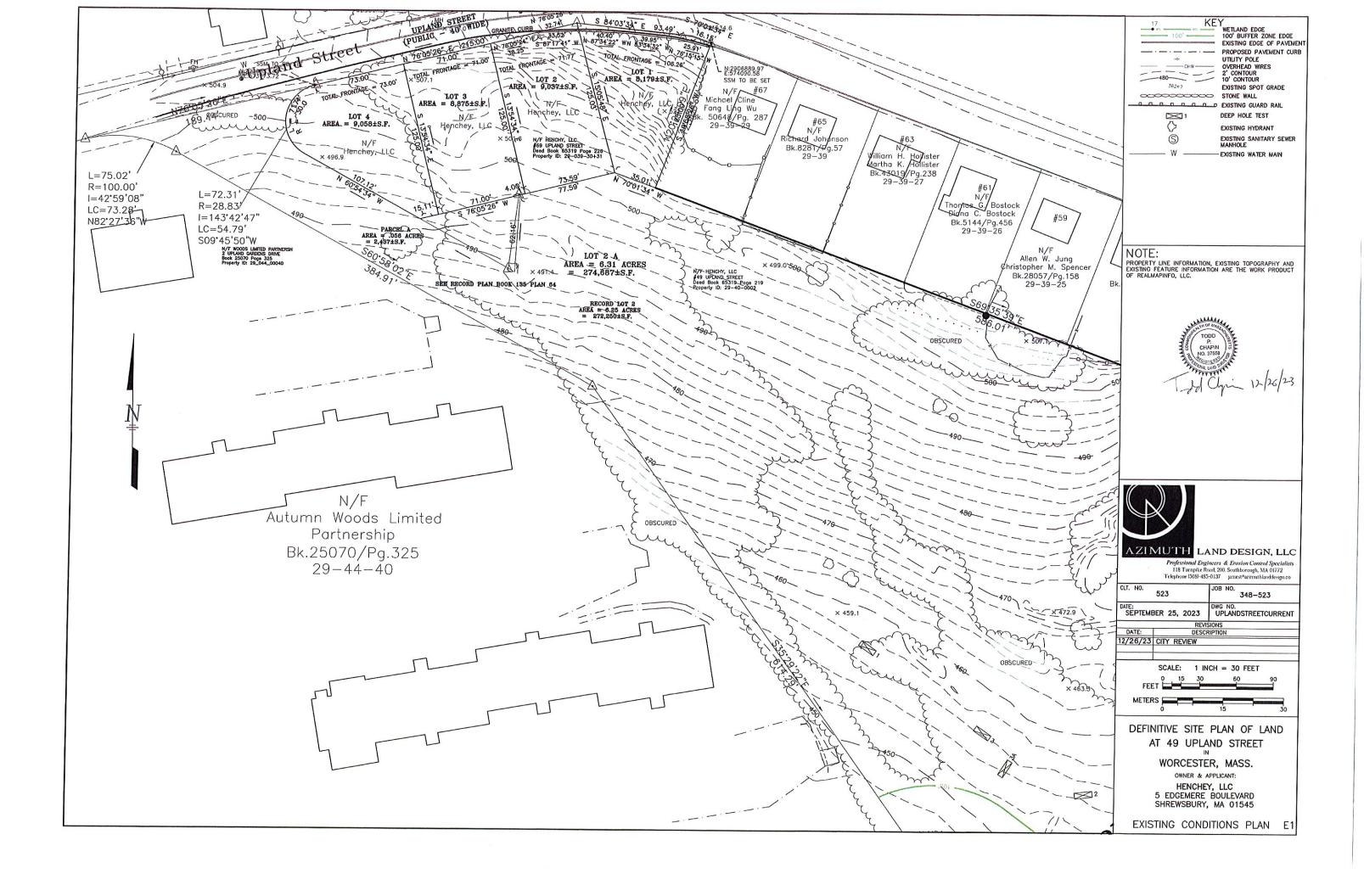


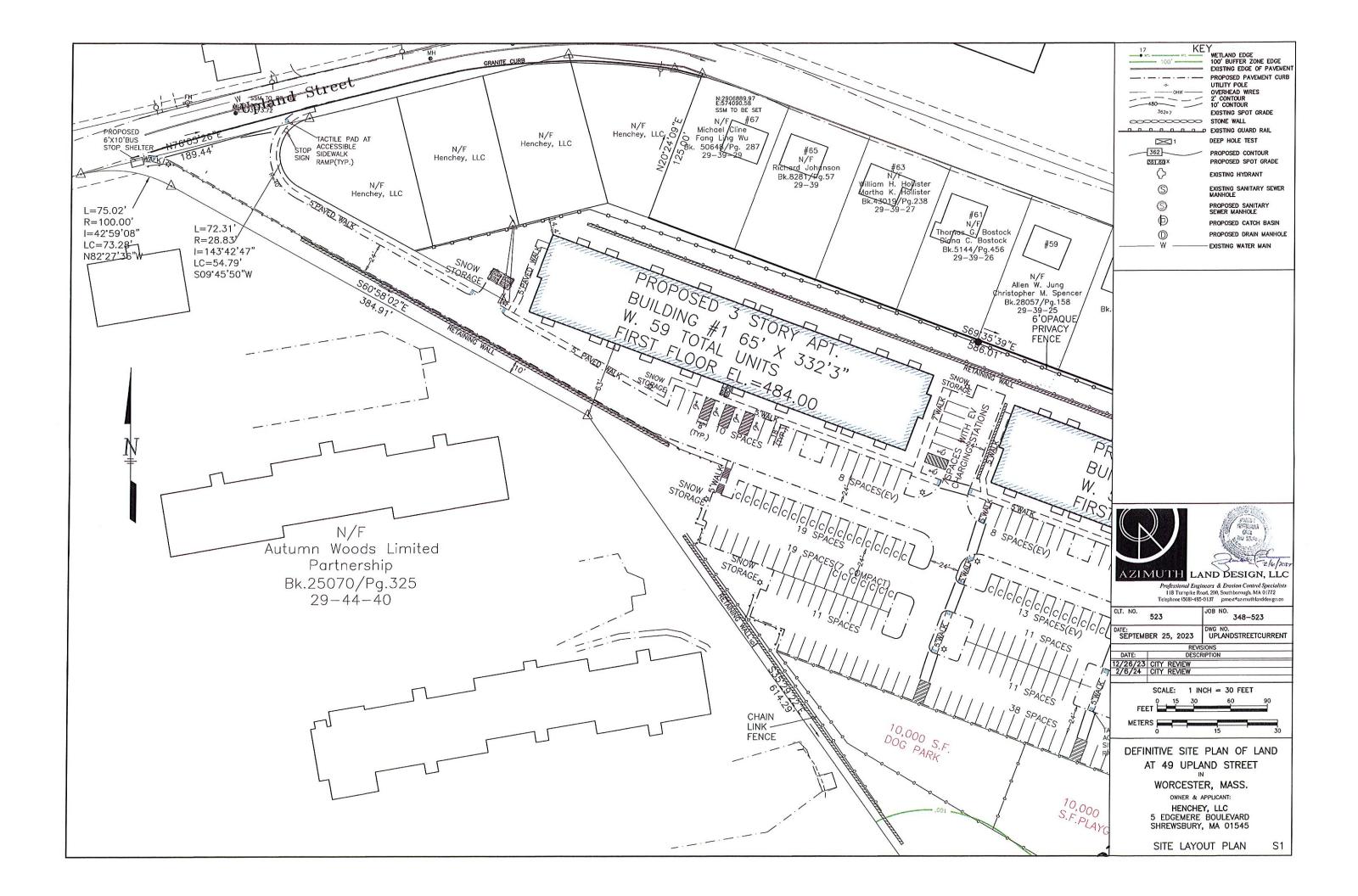
SHEET DIRECTORY

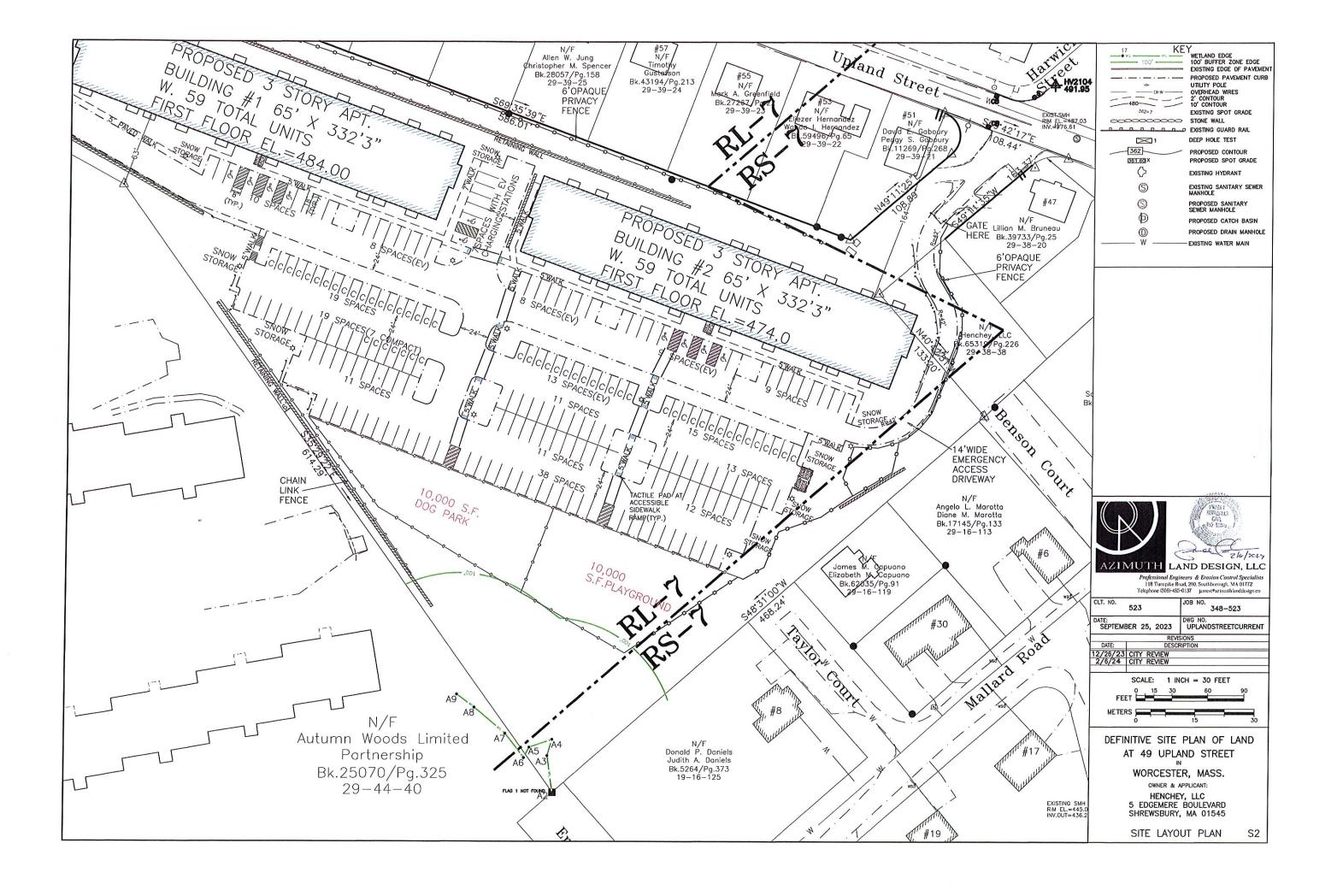
TITLE SHEET (THIS SHEET) KEY SHEET EXISTING CONDITIONS PLANS(UNCHANGED) E1 - E2 SITE LAYOUT PLANS GRADING PLANS G1 - G2 UTILITY PLANS U1 - U2 ESC1 - ESC2 EROSION & SEDIMENT CONTROL PLANS LANDSCAPING PLAN (UNCHANGED) LIGHTING PLAN (UNCHANGED) L2 DETAIL SHEETS D1 - D5

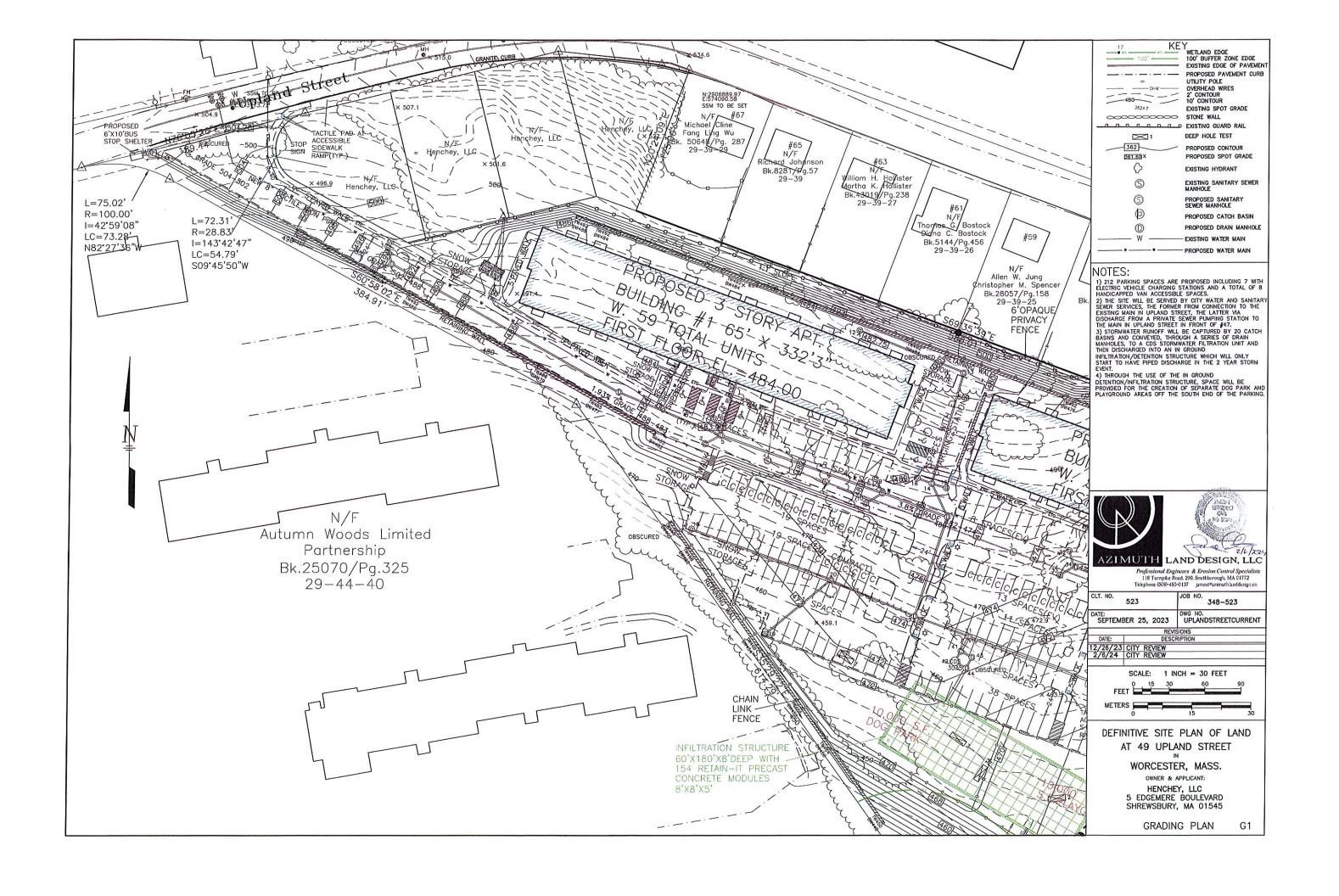


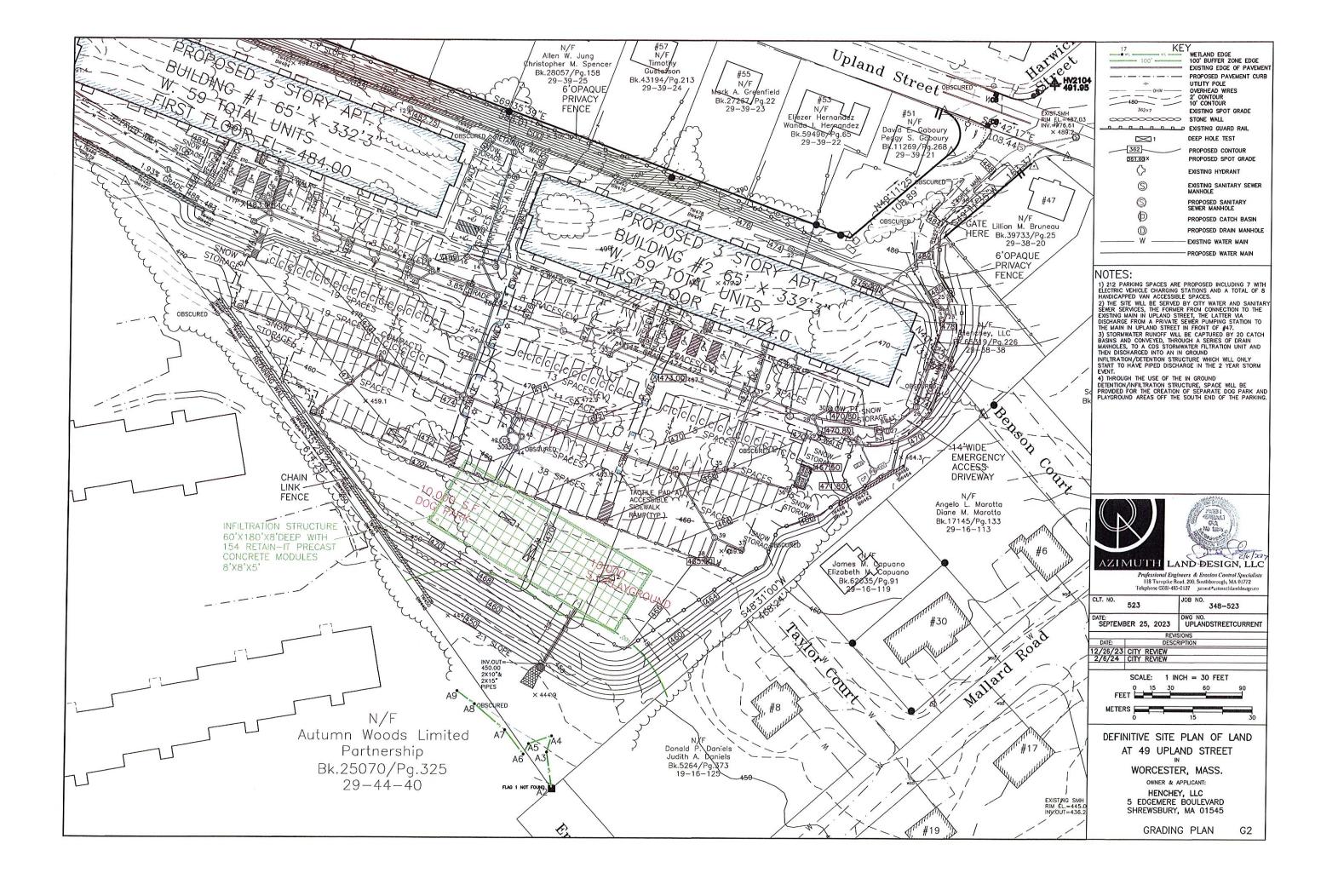


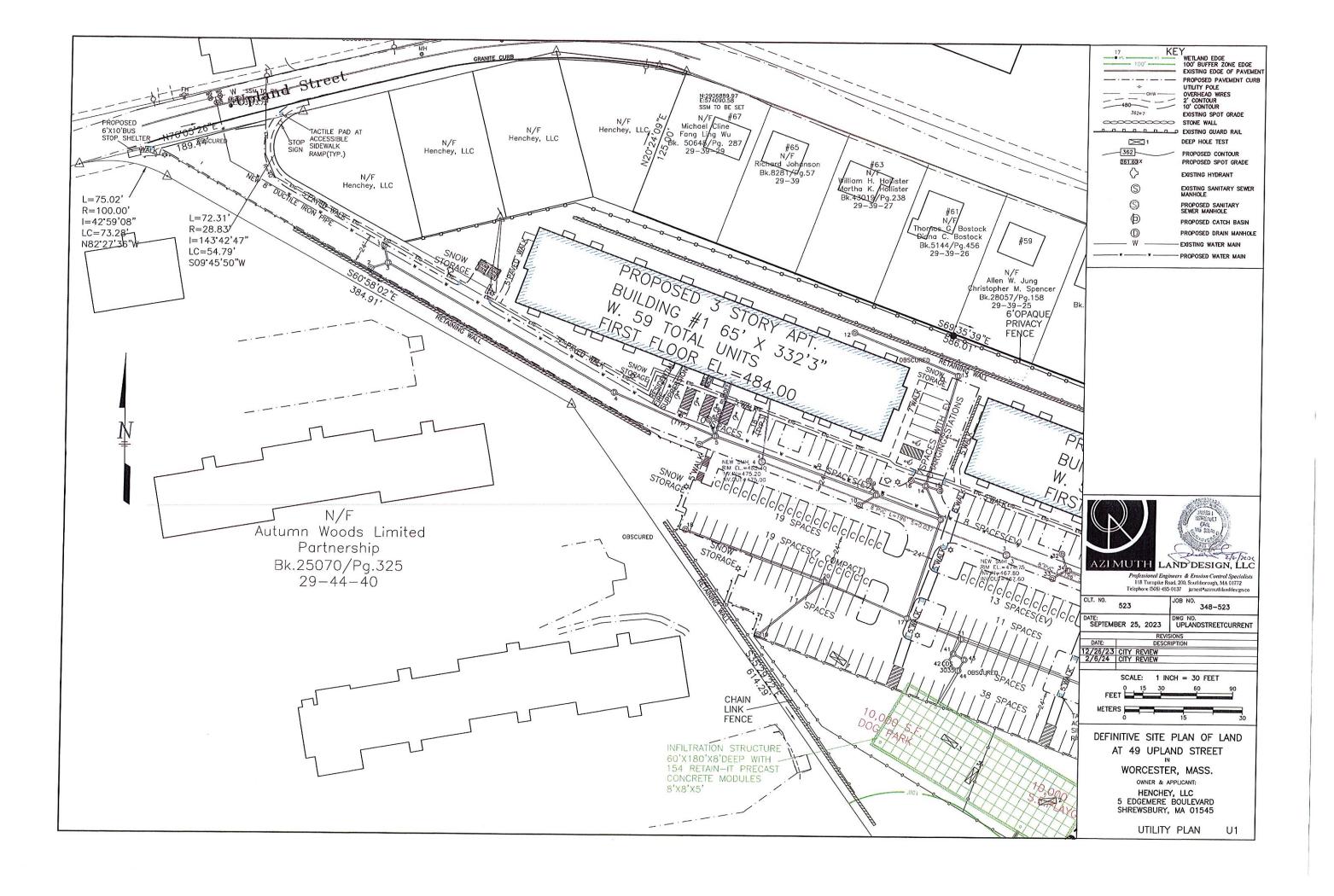


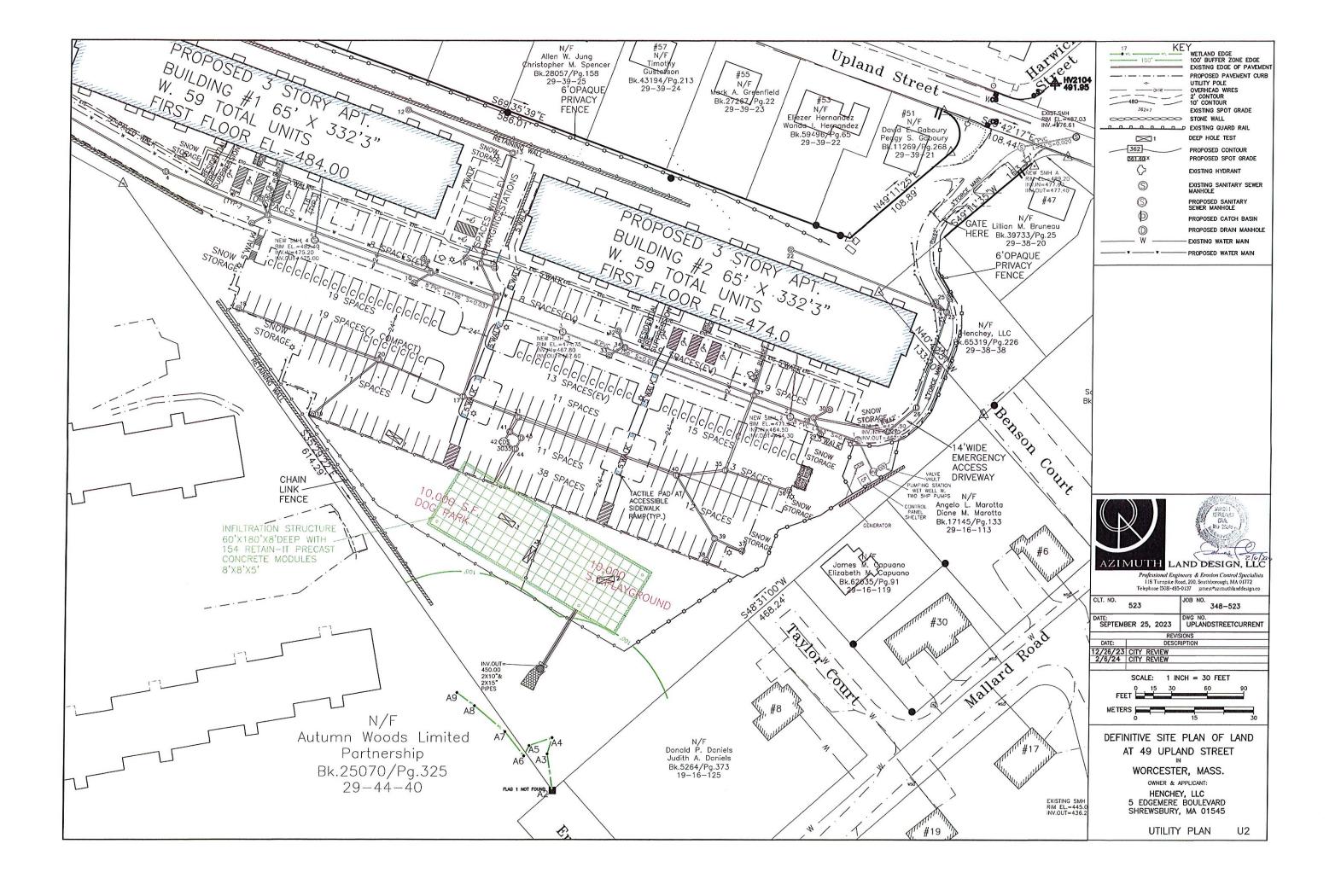


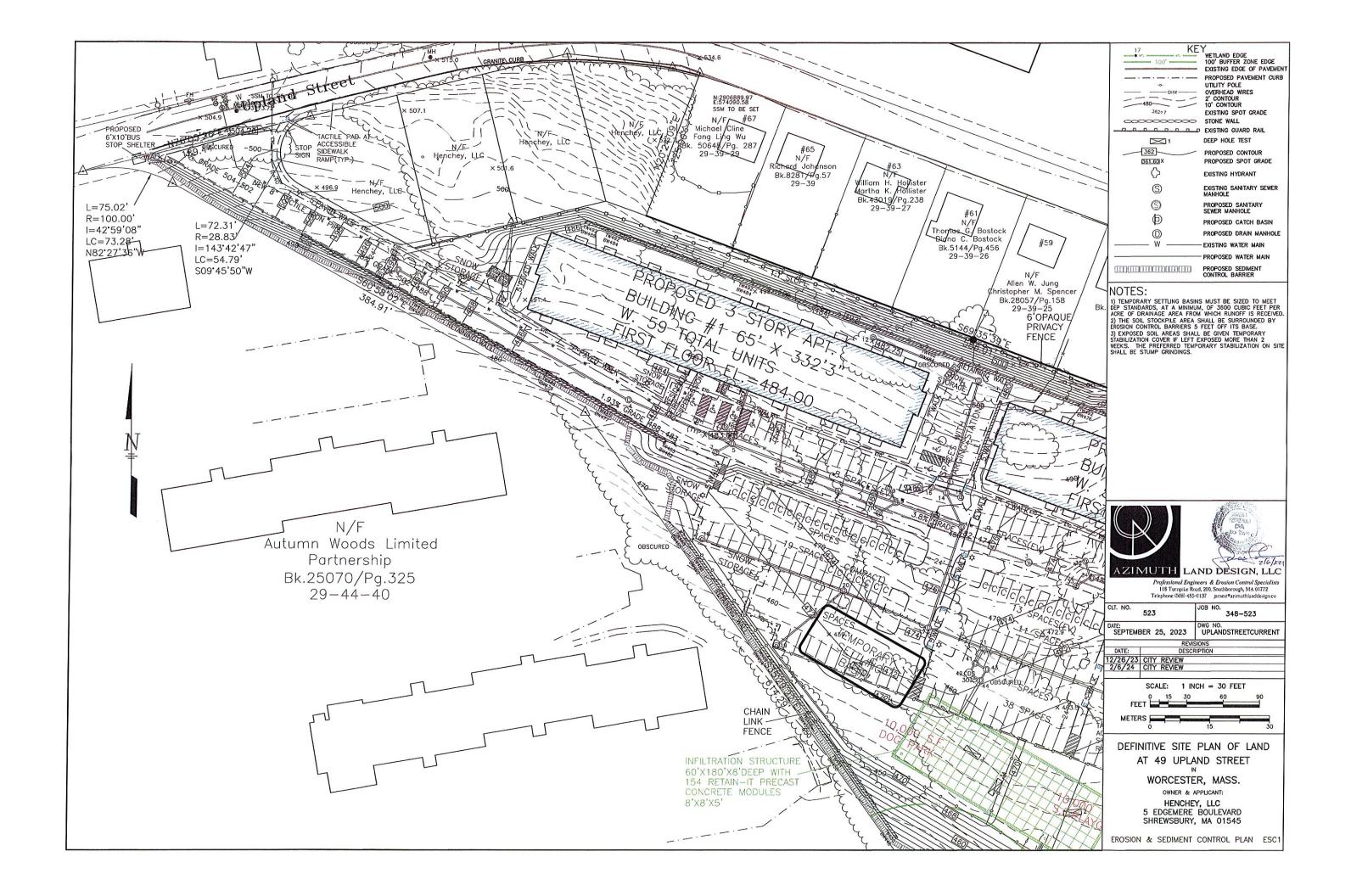


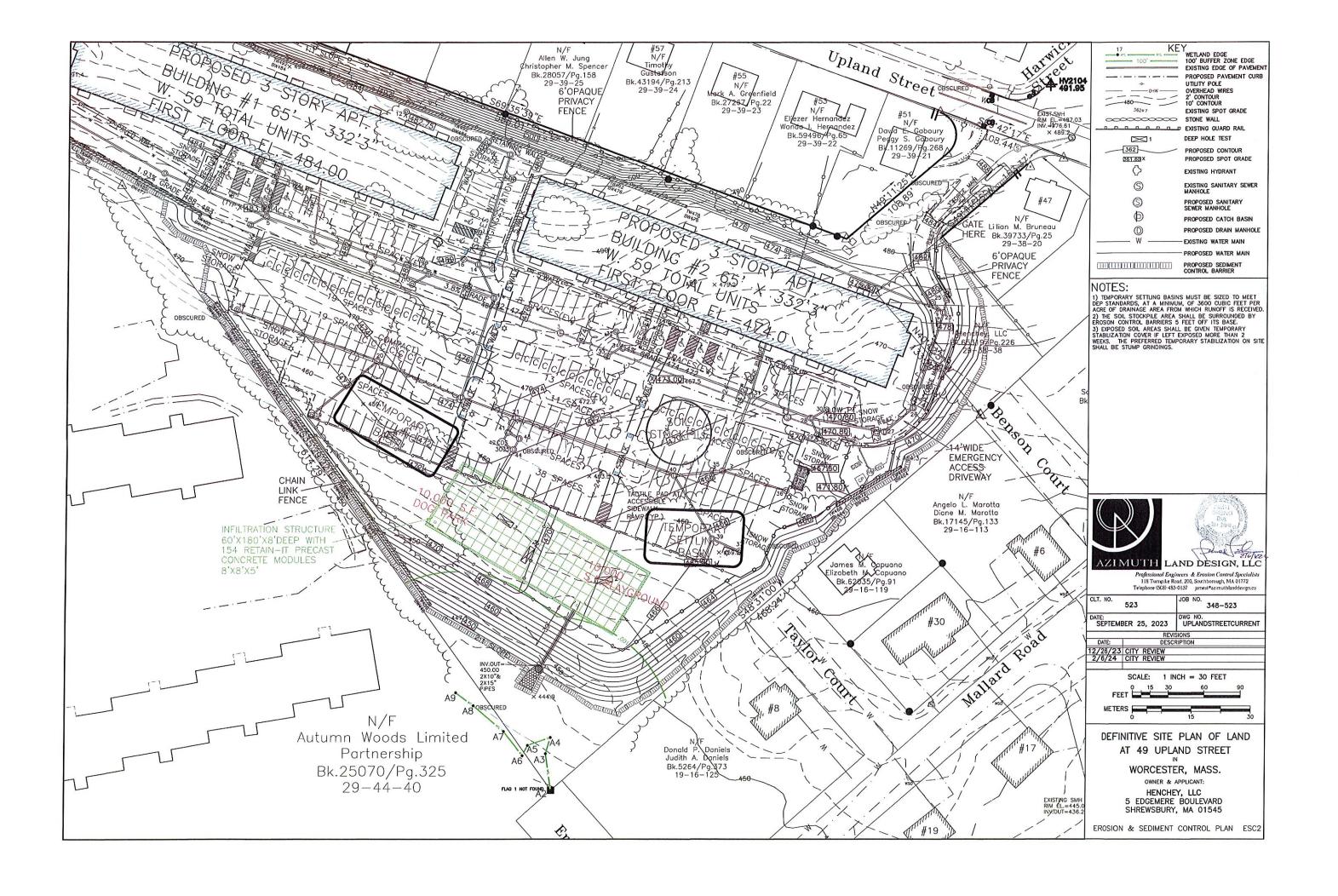


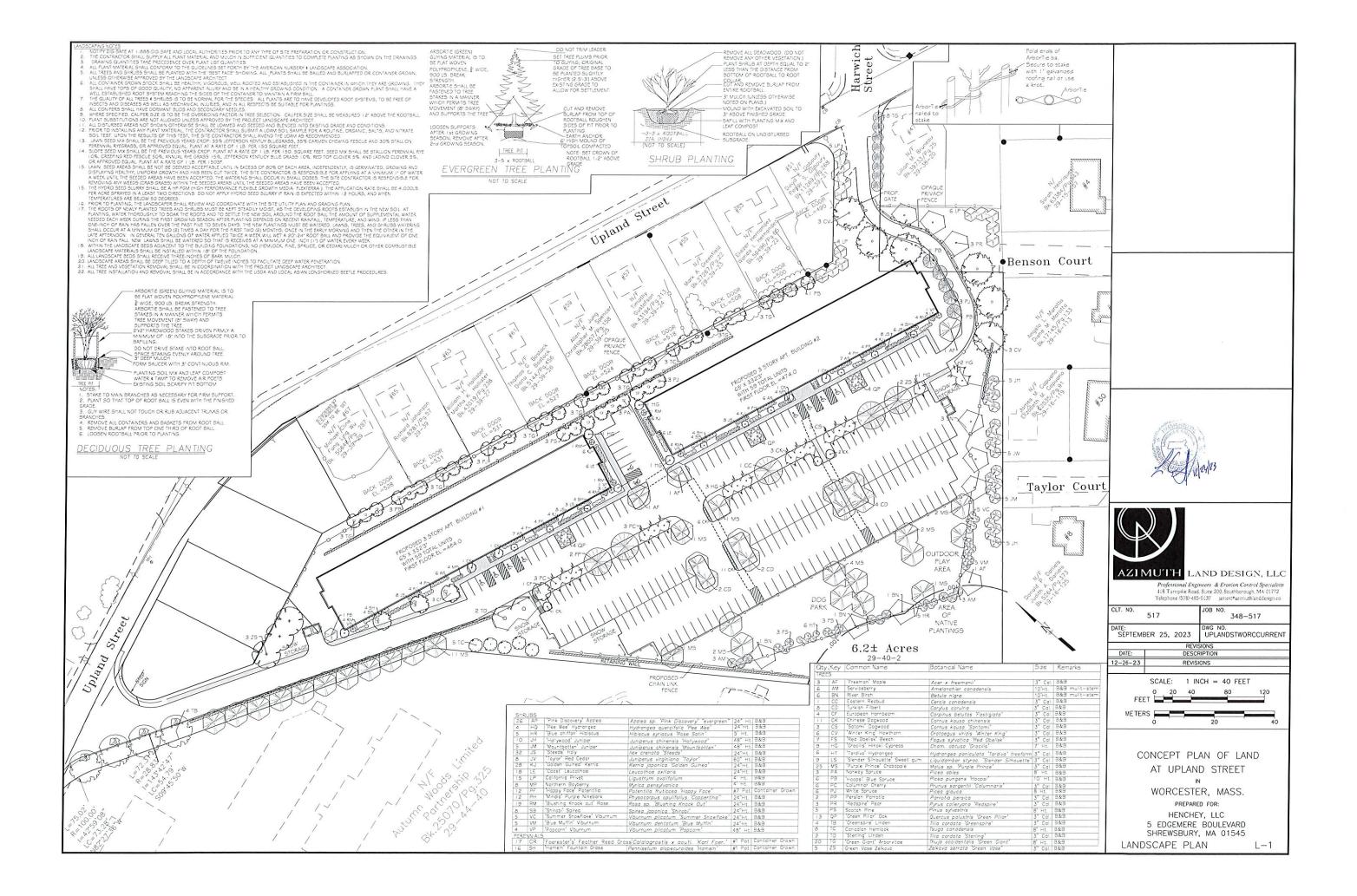


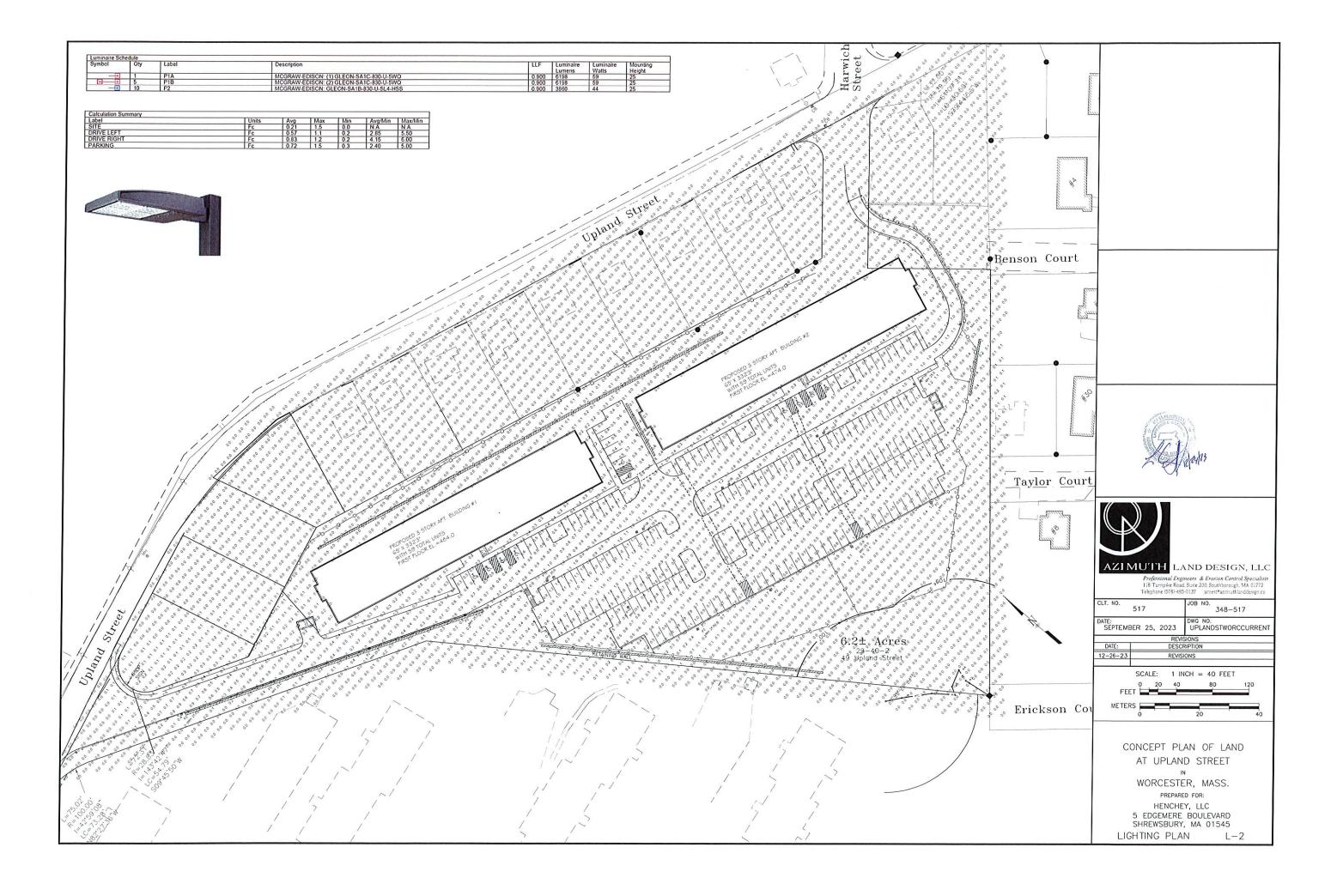


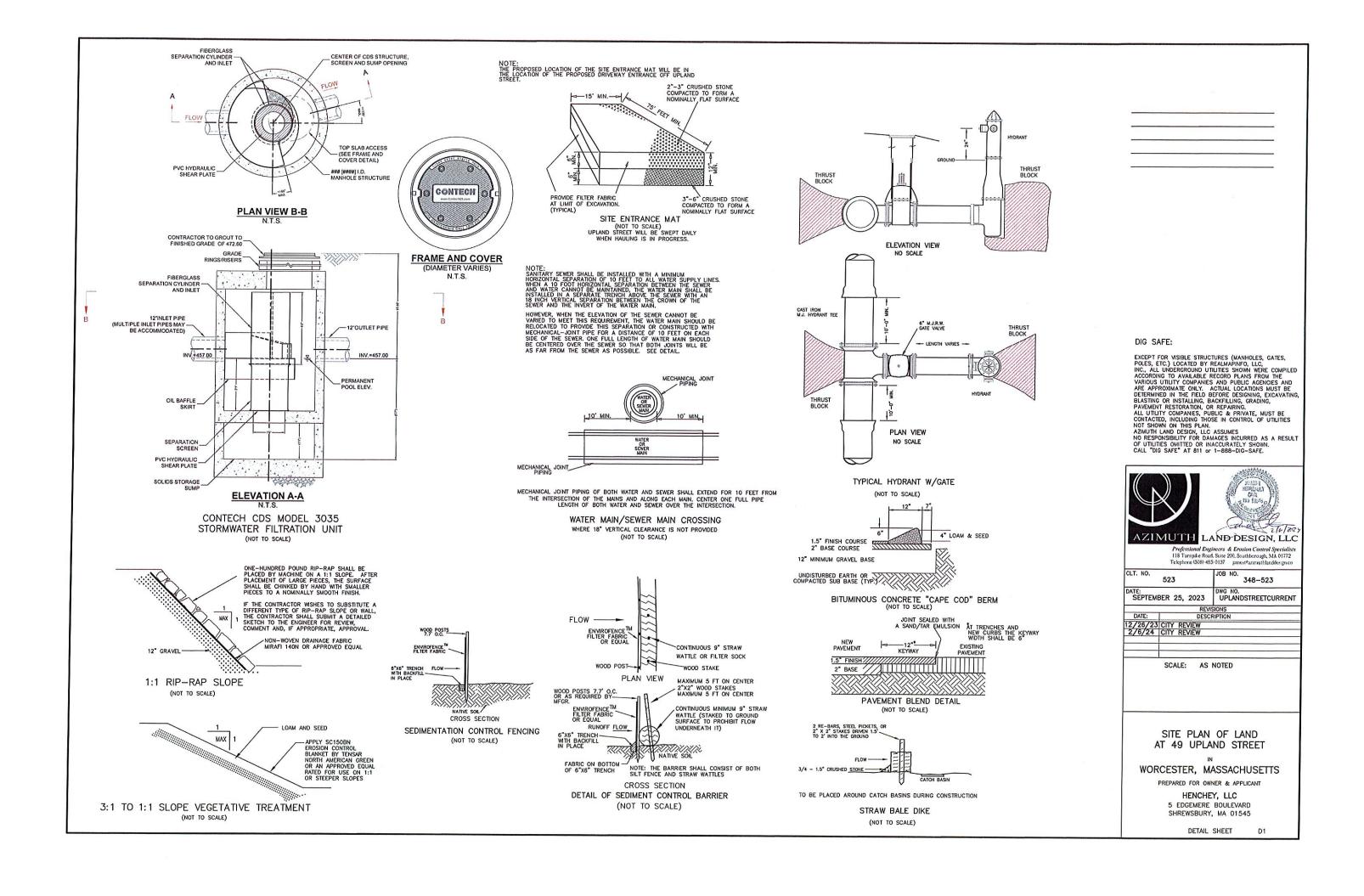


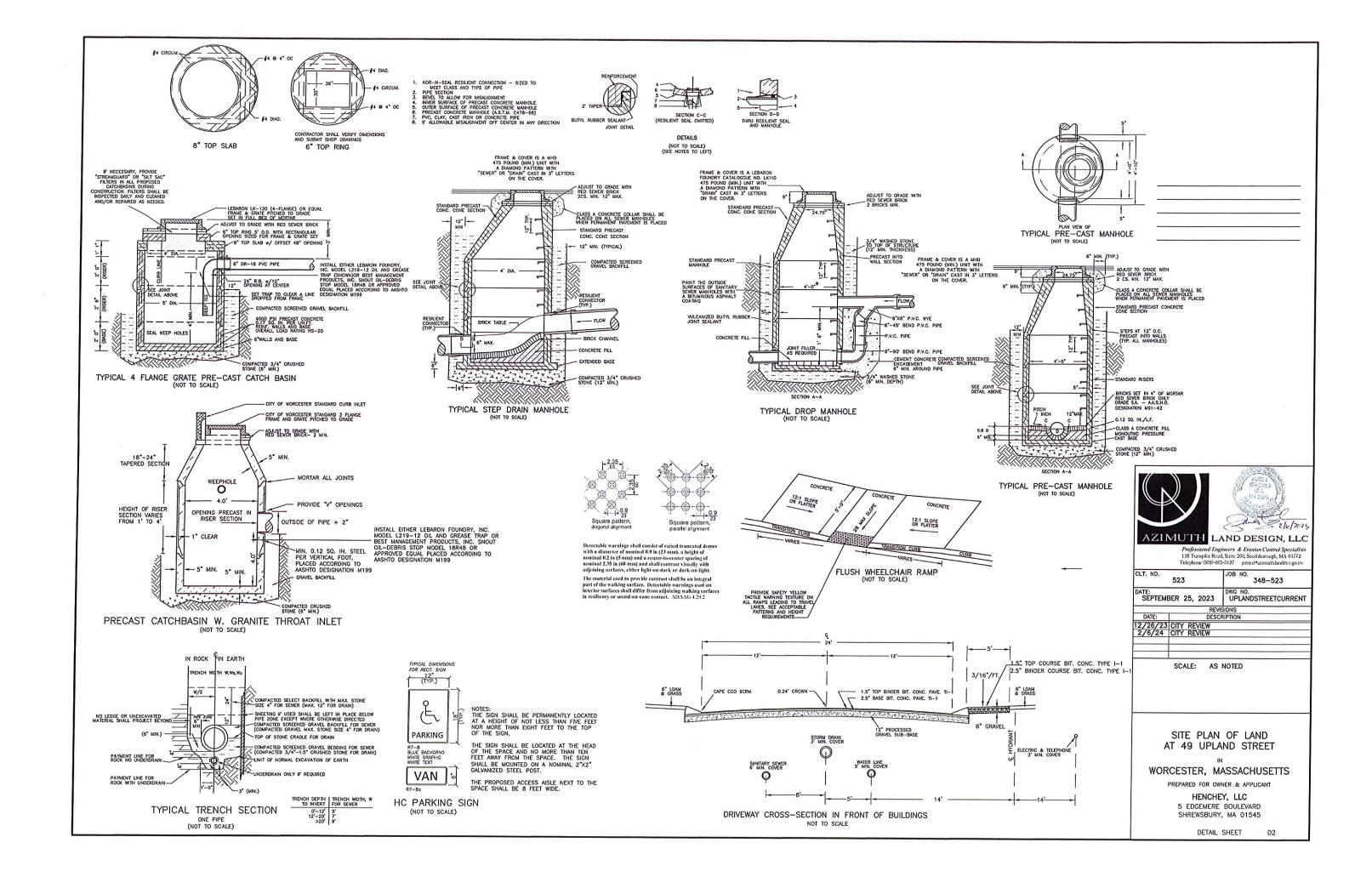


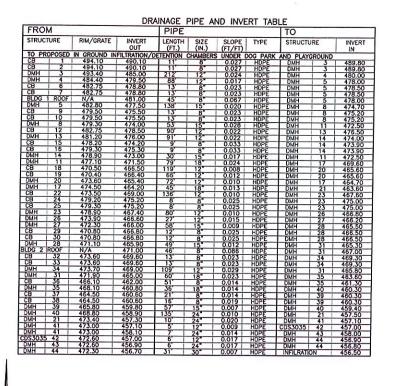


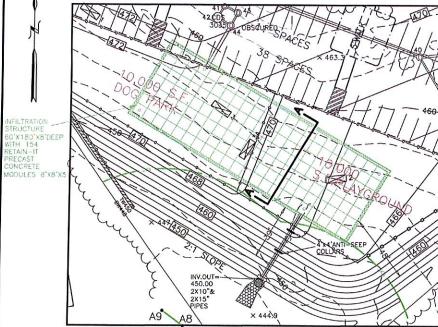


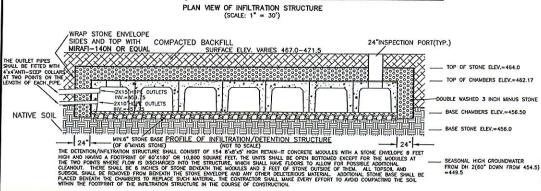


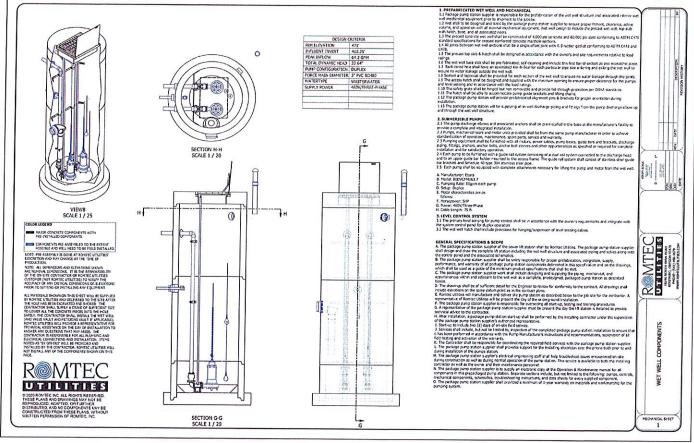


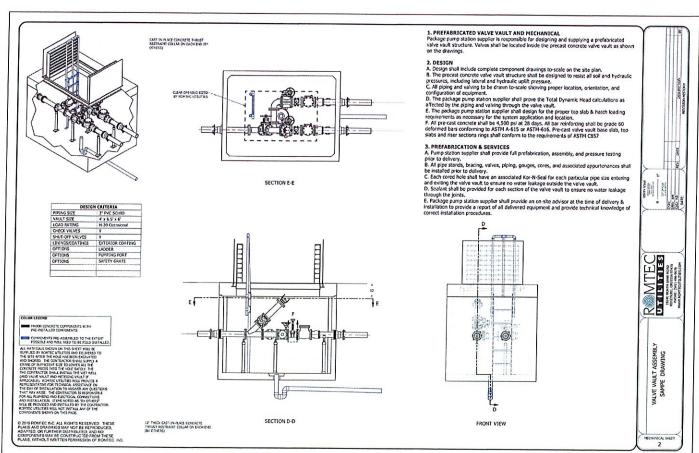












PUMP STATION NOTES:

THE PUMP CONTROLS AND ALARMS SHALL ALL BE MANUFACTURED BY ROMITE UTILITIES(OR APPROVED EQUAL).
 THE OUPLEX PUMPS WITHIN THE WET WALL SHALL BE 5HF PUMPS WITH A PERFORMANCE CURVE SHOWING THE ABILITY TO PUMP AT 80 GPM AGAINST A TOTAL DYNAMIC HEAD OF 35 FEET.

FEET.

3) THE INSTALLATION SHALL INCLUDE A GENERATOR TO PROWDE POWER IN THE EVENT OF A POWER OUTAGE.

4) THE CONTROL PANEL AND ALARMS SHALL BE ABOVE GROUND ON A WALL PANEL BENEATH A SHELTERING STRUCURE.



SITE PLAN OF LAND AT 49 UPLAND STREET

WORCESTER, MASSACHUSETTS

PREPARED FOR OWNER & APPLICANT

HENCHEY, LLC 5 EDGEMERE BOULEVARD

SHREWSBURY, MA 01545

DETAIL SHEET

D3

POLLUTION PREVENTION PLAN FOR

49 UPLAND STREET, WORCESTER, MA

PROJECT DESCRIPTION

This is a proposal to develop this site and construct two apartment buildings each of three stores with a total, between them, of 120 rental units on this 6.6 acre site.

Construction will take place in a single phase and is expected to last from the winter of 2023/2024 into the summer of 2025. Total site alteration will be approximately 5.8 acres of which approximately 0.4 acres was previously altered.

Construction Process
Before construction begins, erosion control barriers consisting of silt fencing attached to posts and backed by staked straw bales will be placed at the limit of work as shown on the Erosion & Sediment Control Plans, Sheets ESC1 and ESC2.

The first step of the construction process will be the cutting of any trees within the limits of proposed development. After this has been accomplished in the demorcated areas,

The time of construction requiring the most attention and care occurs between the stripping of natural overburden and the stabilization of construction areas. Cut and fill areas create additional risk by increasing the possibility of stormwater runoff causing erosion.

The contractor will, to the extent possible, leave natural cover untouched at the edges of the property. The contractor will limit to the shortest time possible the time that areas are exposed. The landscaping will be completed as early as weather and building construction allow. During the times between clearing and landscaping, soils will be stabilized with a combination of stump grindings, wood chips, hay/straw mulch, temporary grass seeding and other measures as necessary to prevent any significant erosion of exists.

Soil stockpile areas will be kept out of the 100 foot buffer zone associated with the delineated wetland on site. Soil stockpiles shall be surrounded by staked silt fence placed at least 5 foot off the toe of slope of the stockpile. One suitable stockpile location is in the area south of building 2.

In conjunction with the site grading process, a number of sedimentation control procedures will be followed. The object of the procedures is to prevent the erosion of soils and the transport of sediments to adjacent properties and eventually to wetland resource areas off site.

Stabilization
Temporary and permanent stabilization of disturbed surfaces is the most reliable method of preventing the erosion and transport of site soils. Toward that end, the areas that are disturbed will be provided temporary stabilization within two weeks after the last disturbance when:

- Work is not complete in that area.

- Work will remain incomplete for a period of three weeks or more, and

- The planting season has not been reached in areas which will be re-vegetated.

Permanent stabilization will take place when:

- Work is complete in that area and

- The planting season has been reached and areas can be revegetated.

Best Management Practices Employed

To guard against the transport of soils offsite several Best Management Practices (BMP's) may be employed. Sediment control barriers, sediment sumps, temporary settling basins, strow bale check dikes, swales, a site entrance mat, floculants in both crystal and block forms, and organic media for capture of silt below floculants may be used on this site as appropriate. All of these measures are temporary. The site's permanent protection against erosion and the deposition of sediment off site at resource areas is the permanent stabilization of formerly exposed surfaces with povement, lawn and other landscaping.

Soils
According to the MassGIS Oliver web site the soils underlying this site are almost entirely Paxton series soils which are categorized as hydrologic soil group C soils. There is also an area at the southerly limit of the site, adjacent to the delineated wetland, identified as a Scarboro series soil and this is categorized as hydrologic soil group D soil.

Resource Areas
There is a bordering vegetated wetland at the southerly limit of the property associated with an intermittent stream on the adjacent property,

SITE PLAN DEVELOPMENT
As part of the Site Plans submitted to the City of Worcester, Azimuth Land Design, LLC has prepared this erosion and sediment control plan calling for permanent and temporary erosion control measures. The site has no existing drainage system.

PHASING
Construction of the project will take place in one phase. Total site alteration will be approximately 5.8 acres.

POLLUTION PREVENTION SITE PLAN

The Site Plans prepared by Azimuth Land Design, LLC contain Erosion & Sediment Control Plans. Various Best Management Practices (BMP's) are described herein and/or shown on sheets ESC1 and ESC2 or the Detail Sheets and will be used to prevent or to mitigate erosion and pollution.

INSPECTION AND MAINTENANCE OF EROSION CONTROLS

1. At all times, siltation fabric fencing, straw wattles or straw bales and stakes sufficient to construct an erosion control barrier a minimum 25 feet long will be stockpiled on the site in order to repair established barriers which may have been damaged or breached.

- 2. The Developer will designate as Inspector a person or entity other than the site supervisor. The Inspector must be accessible seven days a week and be responsible for inspecting and coordinating the maintenance and repair of all erasion control systems on the site.
- 3. An inspection of all erosion control measures shall be conducted by the Inspector at least once each week until the completion of construction of the subdivision. The Contractor shall inspect all erosion control systems daily and shall notify the Inspector of any breaches or failures. In case of any noted breach or failure, the Contractor shall immediately make appropriate repairs.
- The Inspector shall inspect all erosion control systems on the site before, during and after any storm event reaching one of the following thresholds:

 Any storm in which rain is predicted to last for 12 consecutive hours or more.
 Any storm for which a flosh flood watch or warning is issued.

 - c. Any single storm predicted to have a cumulative rainfall greater than 1/2 inch.
 d. Any storm event not meeting the previous three thresholds but which would mark the third consecutive day of measurable rainfall.
- 5. The Inspector shall inspect erosion control measures at times of significant increase in runoff due to rapid thawing when the risk of failure of those measures is significant. 6. In such instances as remedial action is necessary, the inspector shall cause to be repaired within seven days, any and all significant deficiencies in erosion control measures.
- 7. The Worcester Conservation Commission shall be notified of any significant failure of erosion control measures and shall be notified of any release of pollutants

SOIL TEST RESULTS:

UNOFFICIAL SOIL TEST RESULTS

DH1 - SANDY LOAM WITH MOTTLING AT 48"

DH2 - LOAMY SAND WITH MOTTLING AT 60"

DH3 - LOAMY SAND WITH MOTTLING >98"

DH3A - LOAMY SAND WITH MOTTLING AT 66"

PARKING CALCULATION

PER THE WORCESTER ZONING ORDINANCE, 2 PARKING SPACES ARE REQUIRED PER DWELLING UNIT. 118 UNITS ARE NOW PROPOSED WHICH REQUIRE A TOTAL OF 236 PARKING SPACES.

THE APPLICANT IS REQUESTING A SPECIAL PERMIT TO ALLOW A 10% REDUCTION FROM THIS REQUIREMENT. THIS WOULD ALLOW A TOTAL OF 212 PARKING SPACES AND THIS SITE PLAN PROPOSES 212 PARKING SPACES INCLUDING THE FOLLOWING:

8 HANDICAPPED VAN ACCESSIBLE PARKING SPACES 54 COMPACT CAR (8'X16') PARKING SPACES
7 EV AND A FURTHER 38 EV READY PARKING SPACES

ZONING COMPLIANCE TABLE

THE PROPOSED BUILDINGS WILL BE LOCATED IN THE RL-7 ZONING DISTRICT. THE FOLLOWING TABLE COMPARES THE RL-7 ZONING REQUIREMENTS AND DIMENSIONS

DIMENSION	REQUIREMENT	PROPOSED
	0 + 2,000 PER D.U. 0+238,000=245,000	287,304 S.F.
	' + 5' PER D.U. TO 5'+595';USE 140'	189.44 @W'LY FRONTAGE
MIN. FRONT YARD	20'	164'(BUILDING 2)
MIN. SIDE YARD	10'	14.4'(BUILDING 1)
MIN. REAR YARD	20'	63'(BUILDING 1)
MAX. BUILDING HEIGHT	50',3 STORIES	45', 3 STORIES

EROSION CONTROL DEVICES OR PROCESSES

1. Sediment Control Barrier

sediment control barrier will consist of an approved siltation fabric fencing installed on posts according to the manufacturer's instructions and backed by sed straw wattles. The barriers will be placed in a manner that prevents the passage of soil materials under, around or over it. Sediment will be removed in against the barriers when the accumulated sediment has reached one third of the original installed height of the barrier.

2. Strow bale Diversion Dike
Strow balles will be placed in other locations on the site in order to further prevent the flow of sediment from the site or reduce the velocity of runoff crossing open land or running off stockpile or fill areas. Strow bale diversion dikes will also be placed within developing rills to reduce surface runoff velocities and to shift the poth of the water flow. The locations where strow bale diversion dikes are installed will be determined in the field at the Inspector's discretion.

Slope Stabilization
 Slopes or surfaces that are created due to excavation or filling along the edge of the parking or loading areas will be temporarily stabilized with one or more of the following:

 Hay or strow mulch with tackifier
 Soft wood and hard wood chips or stump grindings.

 Permanent stabilization of slopes and surfaces will employ one or more of the following:

 Einches of loarn and gross

- Sod
 Riprop
 Erosion control blankets such as Tensor North American Green C125BN or approved equal and vegetation
 Mulch and landscaping plantings
 A combination of grosses, riprap and/or plants and shrubbery
 In areas that will be steeper than 2:1, after construction, the slope will be stabilized by the placement of heavy riprap or by the installation of erosion control matting specifically rated by the manufacturer for use on a 1:1 slope. The riprap slope will be formed by placing heavy stone on a one foot thick layer of gravel that is covered by an approved filter fabric.

4. Diversion Swale

Runoff diversion swales may be provided in order to intercept sheet and concentrated flows above areas of cut, above abutting properties or Rice Road. The swales will direct runoff to sediment sumps or temporary settling basins. The swales will be approximately 5 feet wide and one foot deep. Straw bale diversion dikes may be installed on the downhill side of the swales to assist in containing the water flow.

Sediment sumps are excavated depressions of 10 foot diameter and 2 foot depth. The sumps will collect runoff from unfinished drives and slopes and will allow sediment to settle out before flow continues to a detention area or siltation control barrier. Sediment sumps will be cleaned whenever the accumulated sediment reached one holf of the original depth of the sump.

6. Temporary Settling Basins

6. Iemporary Settling Basins
Temporary Settling basins (TSG's) are larger excavations made at locations that will receive significant stormwater runoff flow. They are used to capture and detain stormwater in the construction phase to settle out some eroded material and to lessen the rate of flow of stormwater from construction phase work areas. Temporary settling basins are larger than sediment sumps and shall have silt fence strew bale dikes at their entrance and exit to control flow. They shall be sized according to the DEP Stormwater management standards which requires that they have sufficient capacity to hold 1 inch of runoff from the watershed contributing flow to them. For example, a TSB receiving flow from 1 acre of land should have a volume capacity of at least 3,630 square feet. TSB's should have flocculant blocks and jute mesh motting at their outlet. TSB's should be cleaned out whenever the accumulated sediment has reached more than 6 inches deep. No TSB shall be located where the proposed infiltration structure location.

Expected locations for TSB's include both east and west of that proposed infiltration structure location.

If the capture of flows in sediment sumps and temporary settling basins does not sufficiently reduce the turbidity of runoff before it leaves the site, flocculant blocks shall be installed at the outlet of any sediment sump, TSB or swale discharge flow to the site's drainage system. Immediately downstream of the flocculant blocks, a suitable organic media such as jute mesh motting shall be installed over stone for runoff that has contacted the flocculant blocks to flow. This will allow capture of silts.

In addition, crystal flocculants may be used to reduce turbidity of captured runoff in sediment sumps and temporary settling basins.

SEQUENCE OF INSTALLATION AND CONSTRUCTION

The following is a sequence for the construction of the project. The actual schedule may vary somewhat from that stated if site or weather conditions require.

An example of a logical change to the schedule would be deviating from the sequence below to allow the laying of berms prior to a freeze in order to better control the site drainage.

- 1. The Developer will hold a preconstruction meeting with representatives of the City of Worcester in order to review permits, procedures and construction methods.
- 2. The Developer will hold a preconstruction meeting with the Engineer, Contractor's employees and the Inspector in order to review permits, procedures and construction methods.
- 3. Establish the construction entrance(s) to the site off Upland Street.
- 4. Install the site entrance mat in the location of the proposed entrance(s) of Upland Street and sediment control barriers at the limit of work as shown on the Erosion & Sediment Control Plans.
- 5. Remove any debris from the site and disposing of it in appropriate facilities according to applicable regulations.
- 6. Cut trees as necessary for the proposed development but no further. Chip wood and then remove existing povement and dispose of it at an appropriate facility. Then, clear and grub where trees were cut.
- 7. Stockpile and compact excavated loam in an area surrounded by staked straw bales or siltation fencing. We suggest the proposed location south of building 2. Place the straw bales or fencing at least five feet from the base of the loam pile.
- 8. Begin earthwork to bring grades to the subgrade elevations for the proposed access drive and parking area.
- 9. Begin construction of the apartment building and install the utility connections to the proposed buildings.
- 10. Install the new drainage system, new sonitary sewer, new water line services to the buildings and new electric connections and, when complete, lay the binder
- 11. Continue construction of the buildings.
- 12. Permanently stabilize exposed slopes with rirap, 6 inches of loam and grass, other vegetation and landscaping.
- 13. Finish interior construction of the proposed buildings and lay a finish course of pavement.
- 14. Remove accumulated sediment and temporary erosion control measures after all slopes have been permonently stabilized and the risk of erosion has passed,
- 15. Prepare and submit an as-built survey of the work to the City of Worcester.

GENERAL NOTES:

- 1) THERE ARE NO FEMA FLOOD ZONES ON THIS SITE.
- ACCORDING TO THE MASS GIS OLIVER WEB SITE, THERE ARE NO ENDANGERED SPECIES HABITATS AND NO VERNAL POOLS ON OR ADJACENT TO THIS SITE.
- 3) THE PROJECT SITE IS COMPRISED OF 49 AND 39 UPLAND STREET.
- 4) TOTAL SITE ALTERATION IS EXPECTED TO BE 5.8 ACRES.
- 5) THE PROPOSED WATER MAIN EXTENDED INTO THE SITE SHALL MEET THE REQUIREMENTS OF ANSI/AWWA
- 6) BOTH BUILDINGS SHALL HAVE STANDPIPES INSTALLED TO AID IN FIRE FIGHTING
- 7) EACH OF THE TWO BUILDINGS COVERS 21,318 SQUARE FEET(NOT INCLUDING BALCONIES).
- 8) THE APPLICANT SHALL COMPLY WITH THE CITY'S INCLUSIONARY ZONING REGULATIONS BY MAKING AT LEAST 15% OF THE UNITS AVAILABLE AS "AFFORDABLE" UNITS MARKETED TO HOUSEHOLDS EARNING 80% OR LESS OF THE AREA MEDIAN INCOME.
- 9) PROPOSED RETAINING WALLS SHALL BE COMPRISED OF CONIGLIARO BLOCK COMPONENTS. OR APPROVED EQUAL. ENGINEERED, STAMPED DESIGNS SHALL BE SUBMITTED TO THE CITY FOR APPROVAL BEFORE ANY INSTALLATION REGINS



JOB NO. CLT. NO. 348-523 ATE: SEPTEMBER 25, 2023 UPLANDSTREETCURRENT DATE

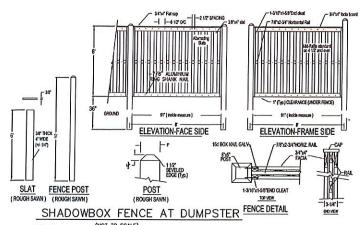
SCALE: AS NOTED

SITE PLAN OF LAND AT 49 UPLAND STREET

WORCESTER, MASSACHUSETTS PREPARED FOR OWNER & APPLICANT

> HENCHEY, LLC 5 EDGEMERE BOULEVARD SHREWSBURY, MA 01545

> > DETAIL SHEET D4

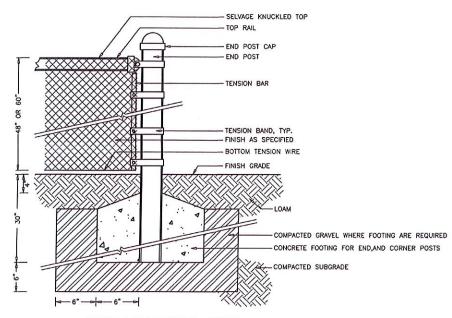


NOTES: (NOT TO SCALE)

- 1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
- SPECIFICATIONS.

 2. SHADOW BOX FENCE TO BE 4' WALPOLE SHADOWBOX SCREEN FENCE, WALPOLE WOODWORKERS, O.O. BOX 151 WALPOLE, MA 02081, PHONE 1-800-343-6948, OR APPROVED EQUAL

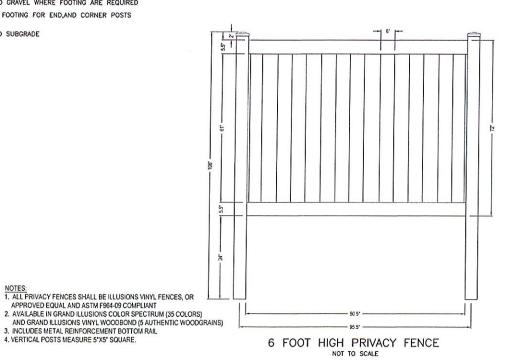
 3. WOOD MATERIAL TO BE NORTHERN WHITE CEDAR

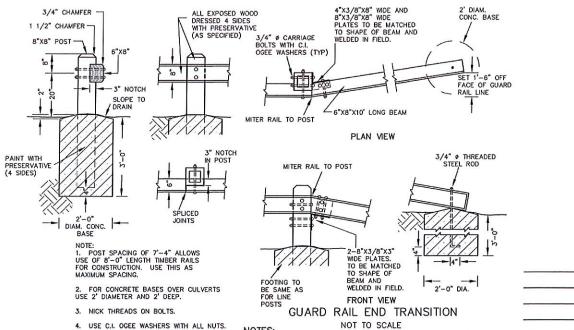


4. VERTICAL POSTS MEASURE 5"X5" SQUARE.

CHAIN LINK SAFETY FENCE 48" AT TOP OF STEEP SLOPES AND RETAINING WALLS

NOT TO SCALE





TIMBER GUARD RAIL

NOT TO SCALE

NOT TO SCALE 1) THIS PLAN IS IN COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT AND THE REQUIREMENTS OF THE MASSACHUSETTS ARCHITECTURAL ACCESS

2) A 4 FOOT HIGH SAFETY FENCE SHALL BE INSTALLED ON TOP OF ALL PROPOSED RETAINING WALLS.



348-523 DATE: SEPTEMBER 25, 2023 DWG NO.
UPLANDSTREETCURRENT 12/26/23 CITY REVIEW 2/6/24 NO CHANGES TO THIS SHEET

SCALE: AS NOTED

SITE PLAN OF LAND AT 49 UPLAND STREET

WORCESTER, MASSACHUSETTS

PREPARED FOR OWNER & APPLICANT HENCHEY, LLC 5 EDGEMERE BOULEVARD

SHREWSBURY, MA 01545 DETAIL SHEET