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Clough Harbour Associates, LLP Civil Engineers 101 East River Drive, 1st Floor East Hartford, CT 06108 860.290.4100



OWNER/APPLICANT NICHOLS COLLEGE

121 CENTER ROAD PO BOX 5000 DUDLEY, MA 01571 508-213-2217

TOWNHOMES

CENTER ROAD, DUDLEY, MA 01571

REVISIONS			
NO.	DATE	BY	REMARKS
1	6/30/22	PMP	REVIEW COMMENTS
2	10/3/22	PMP	REVISED SITE LAYOUT

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PLANNING BOARD SUBMISSION

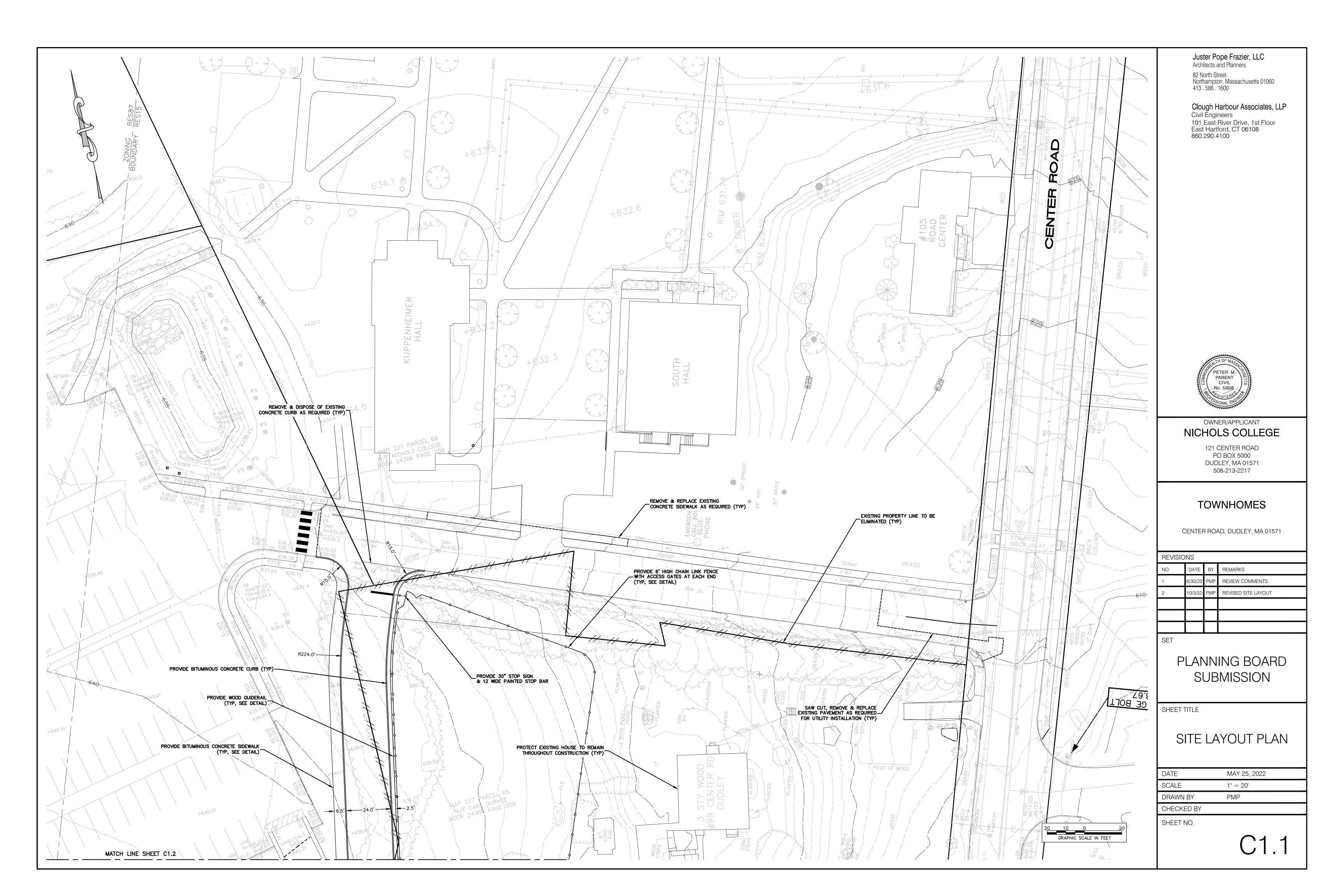
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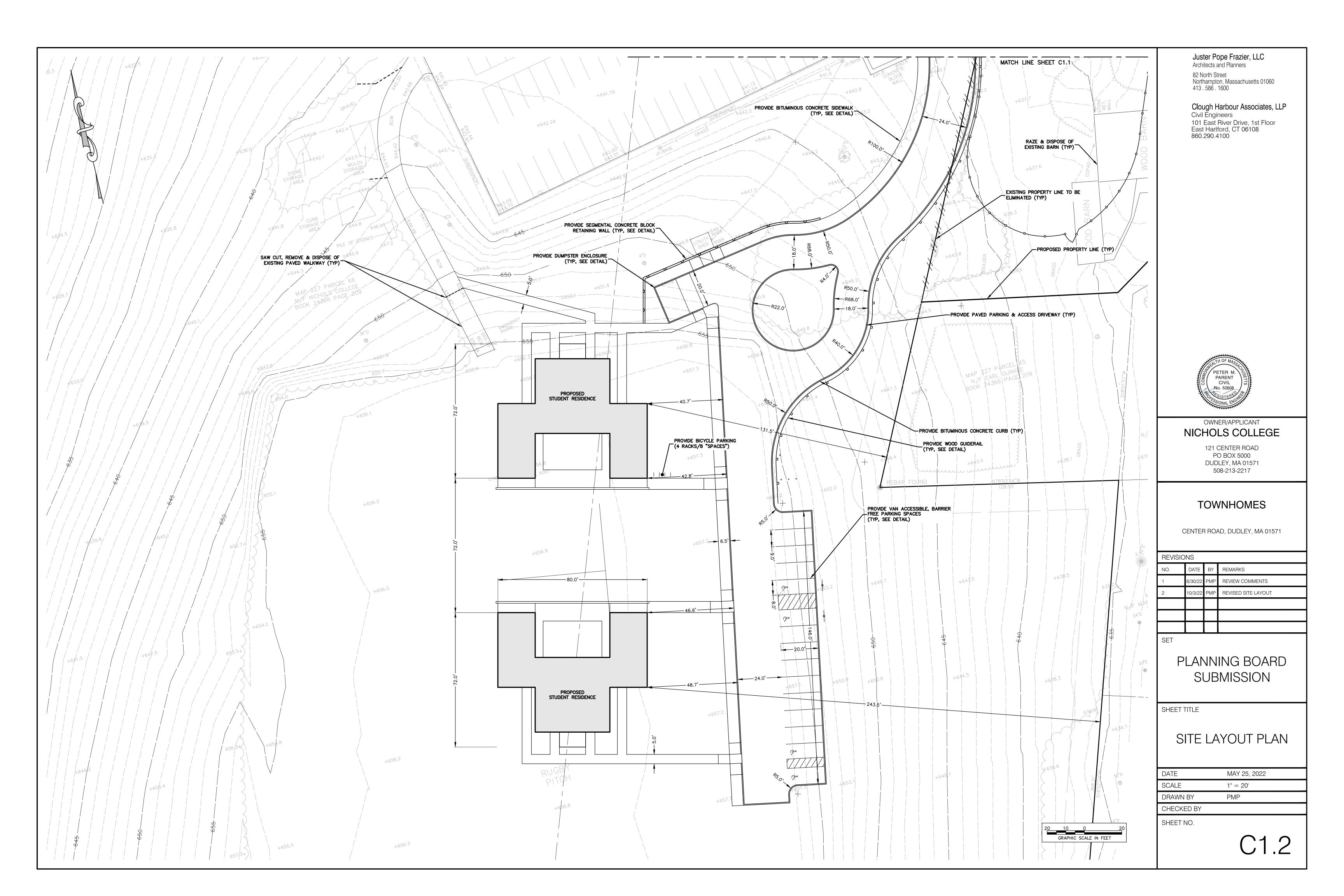
OVERALL SITE PLAN

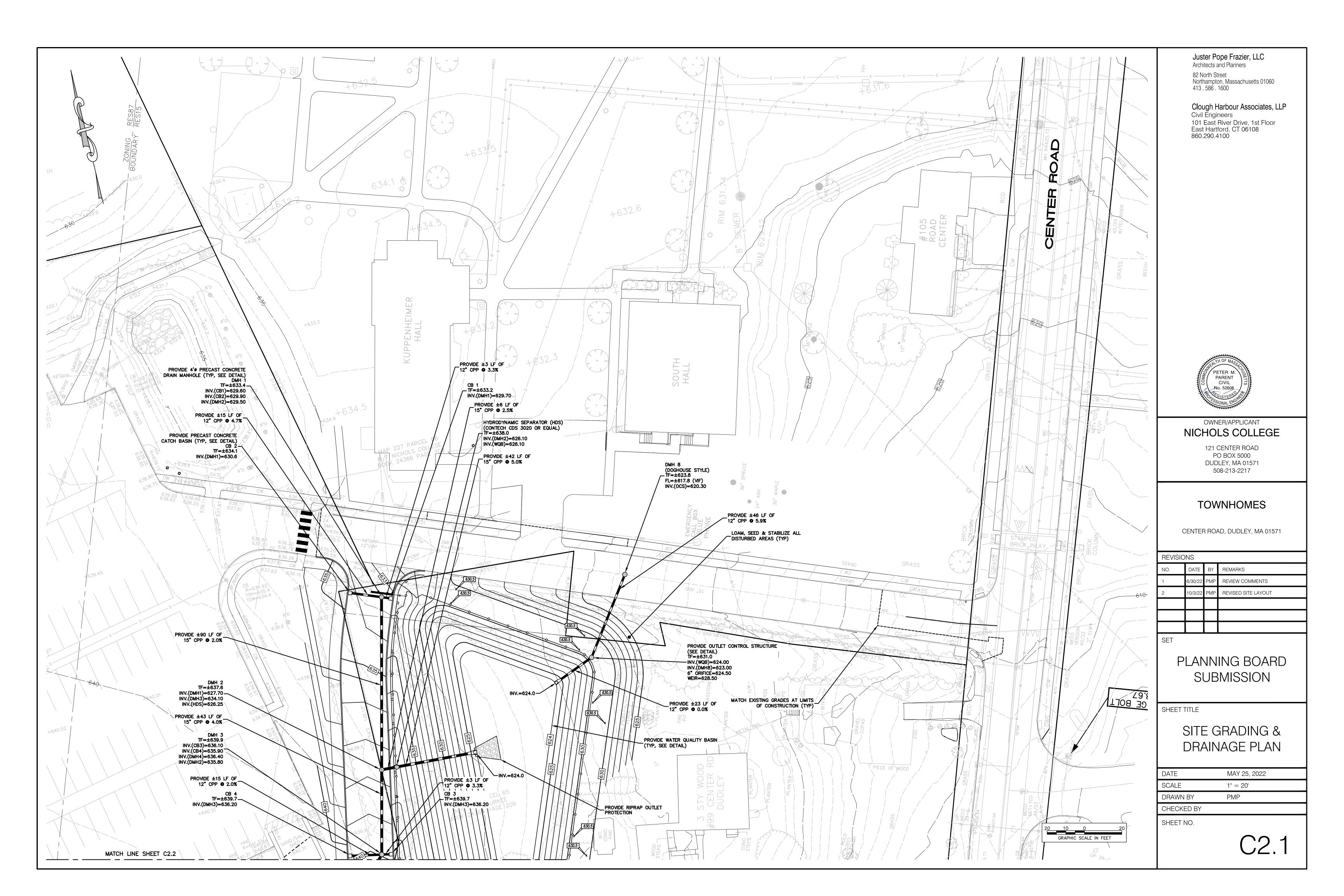
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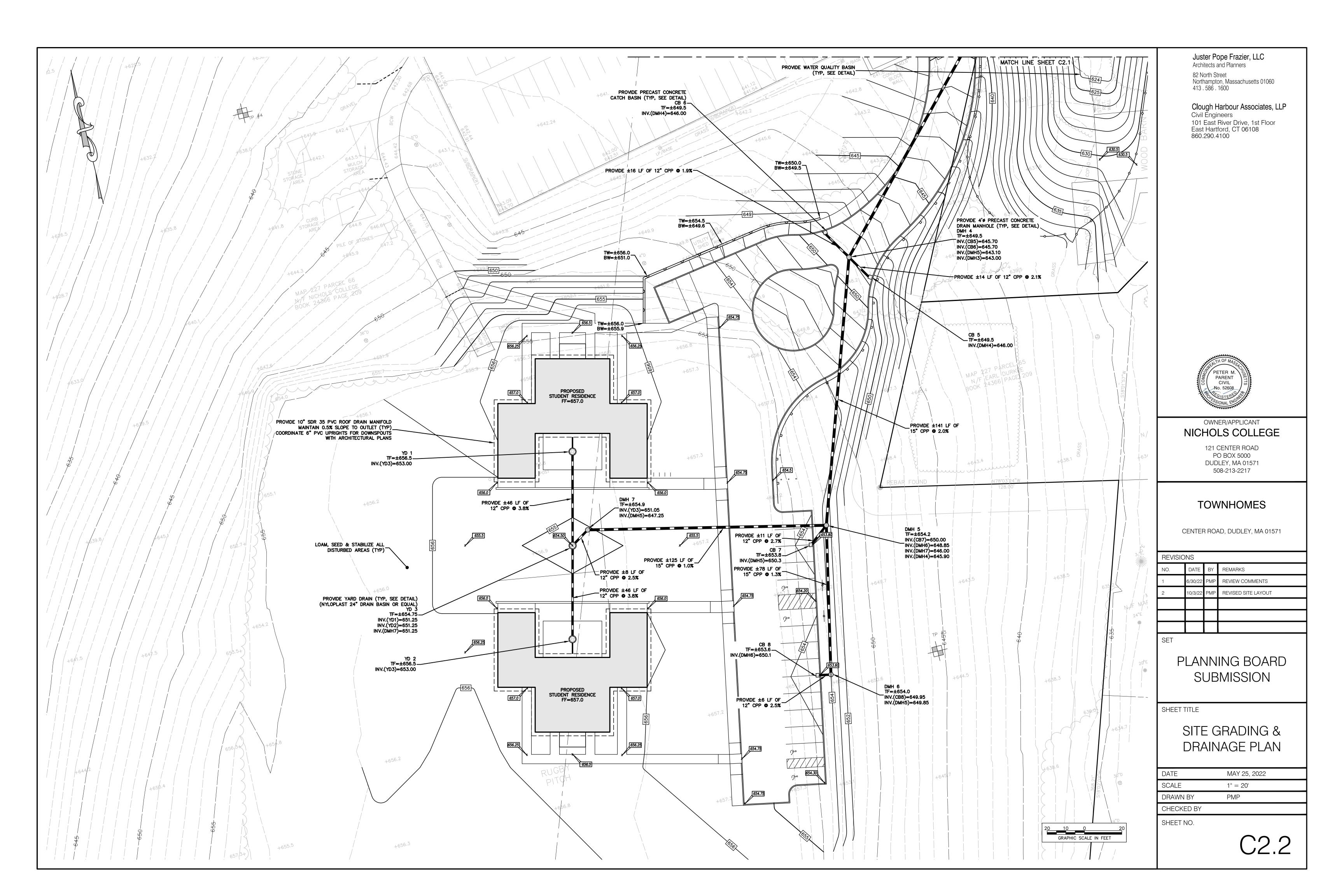
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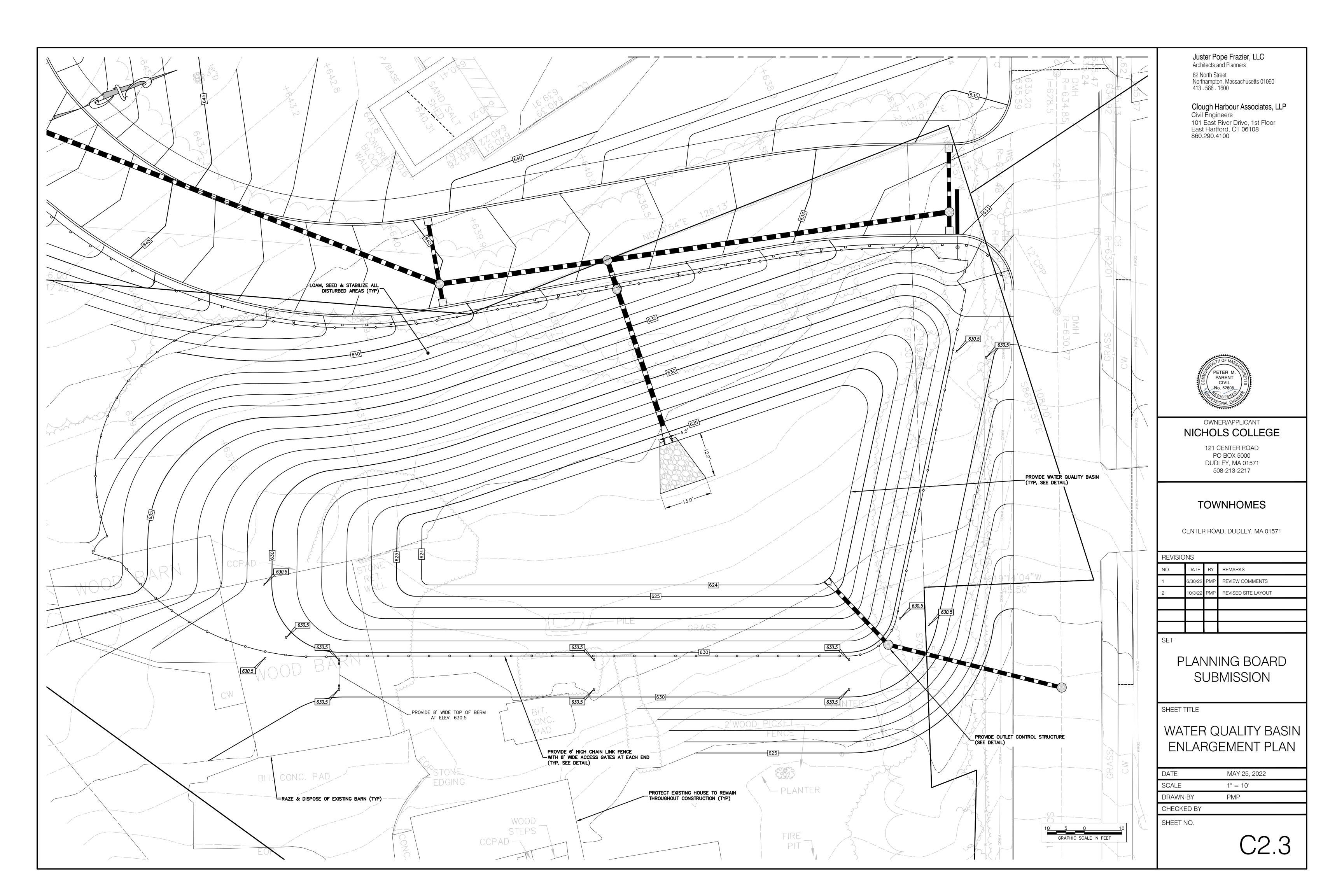
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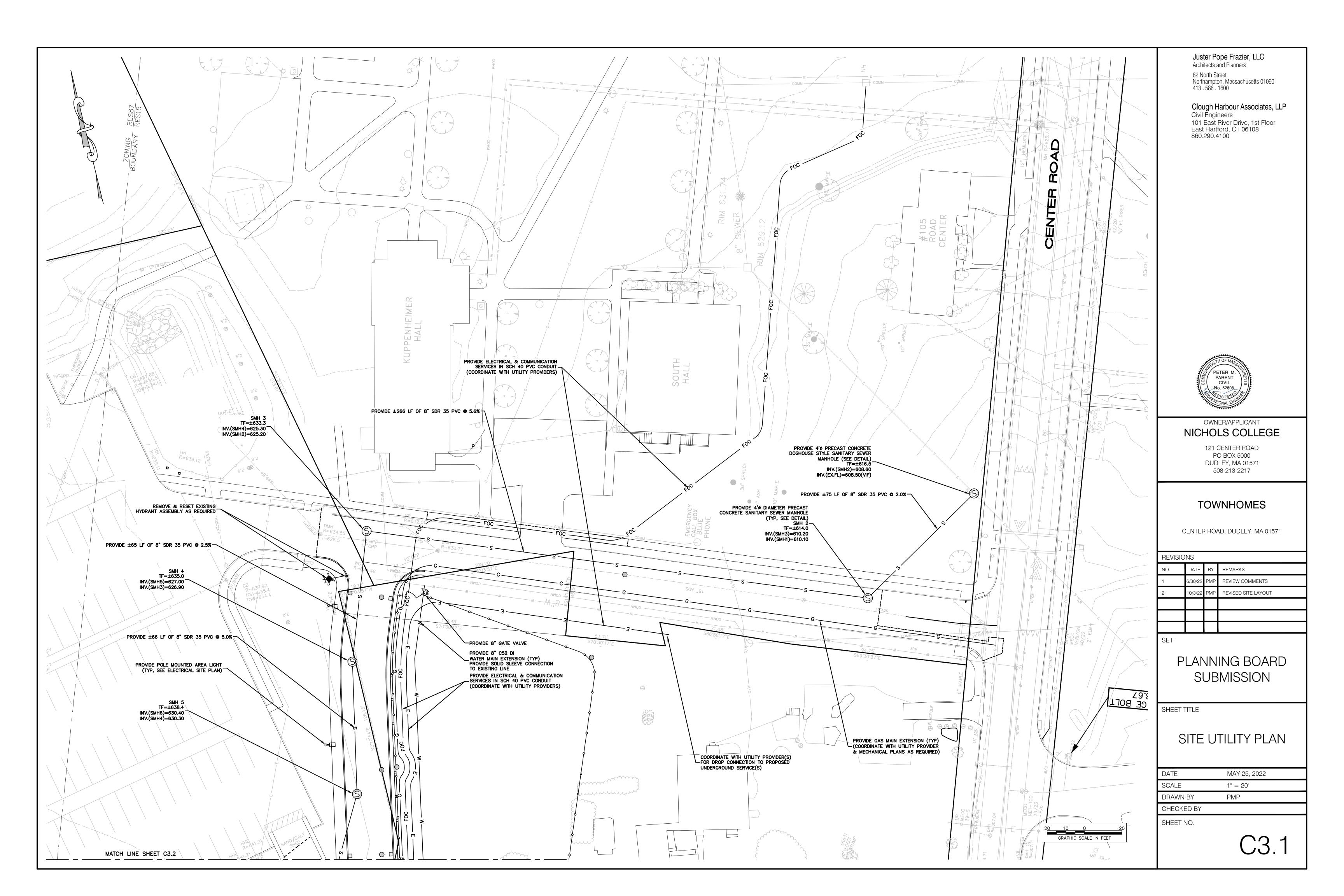


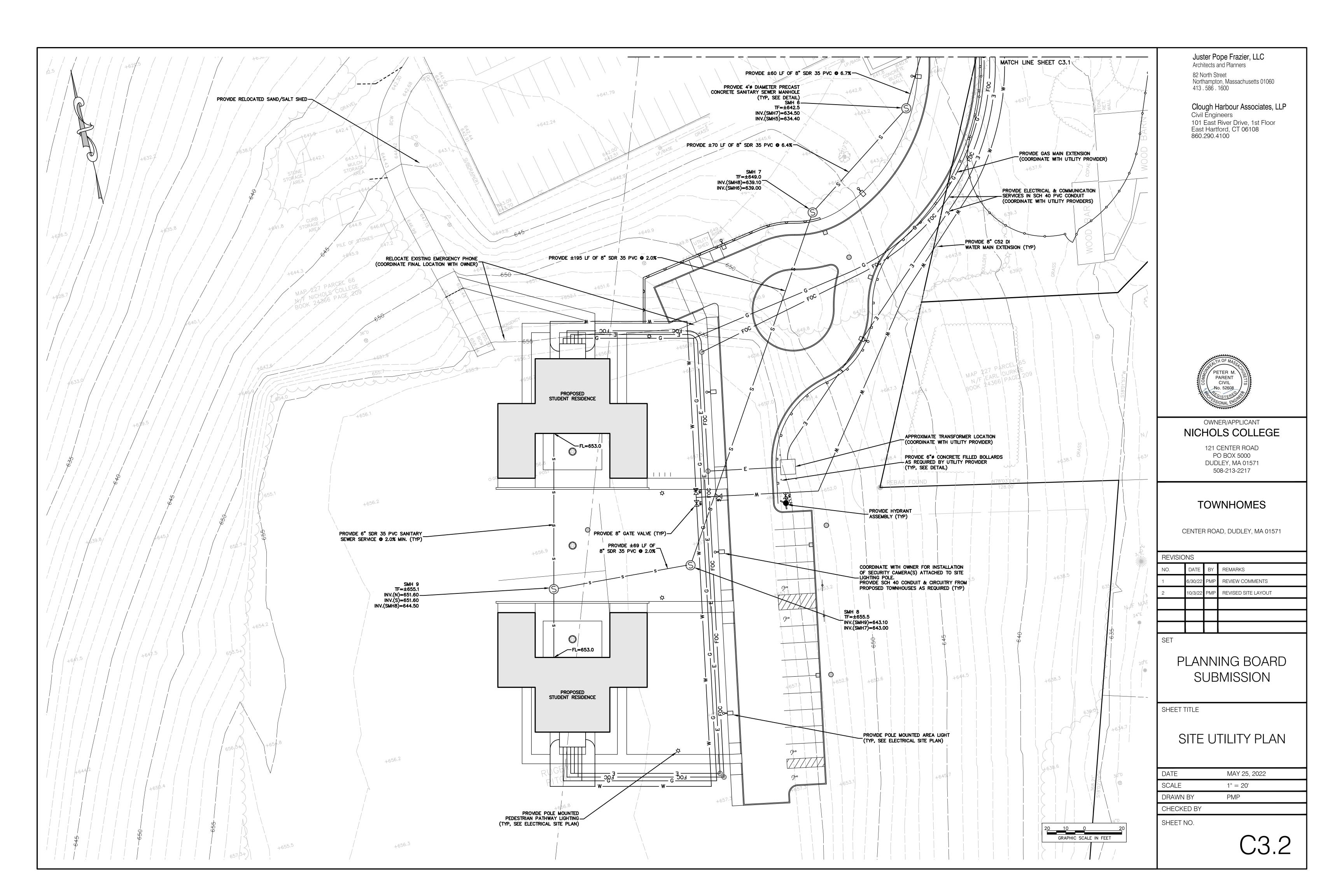


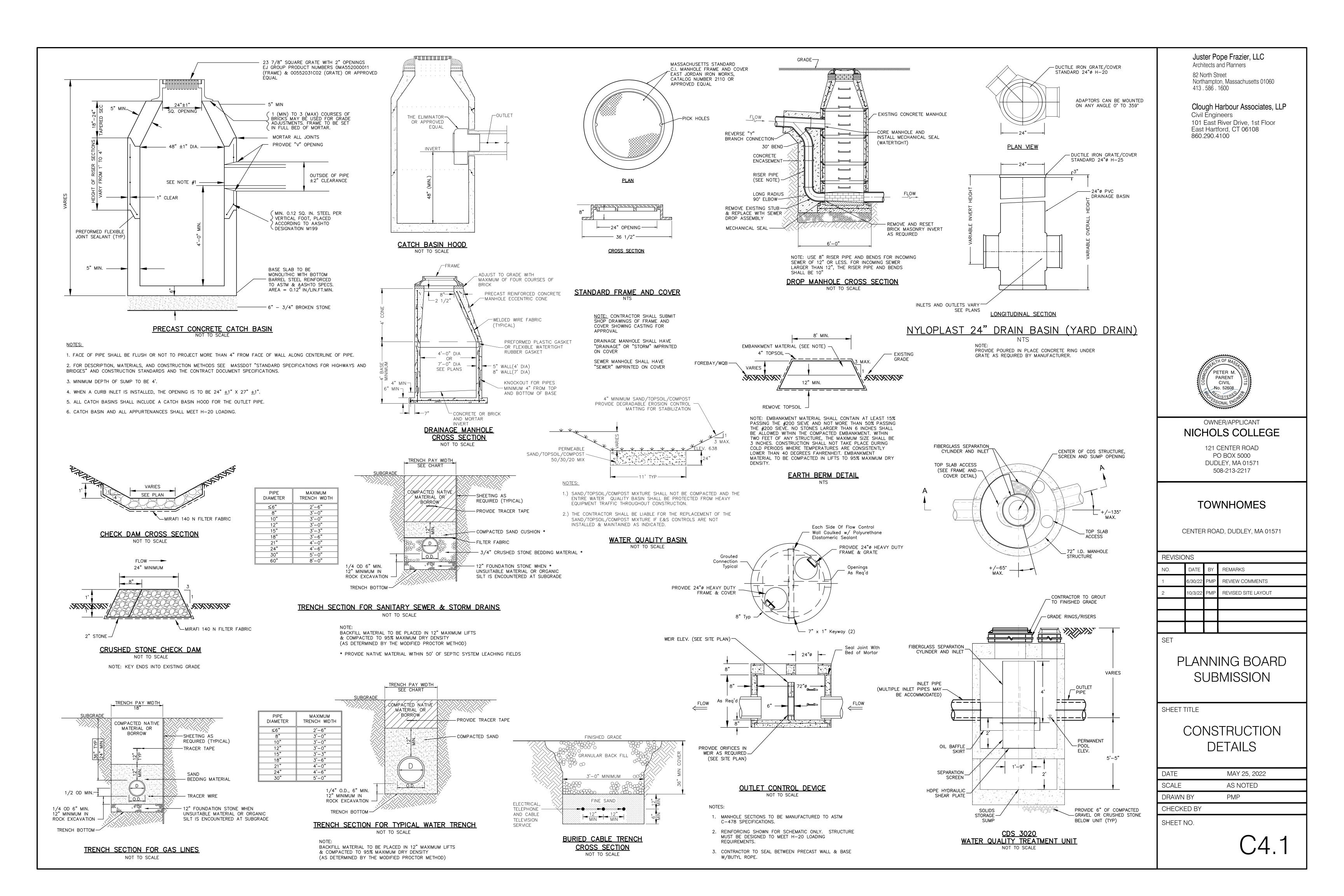


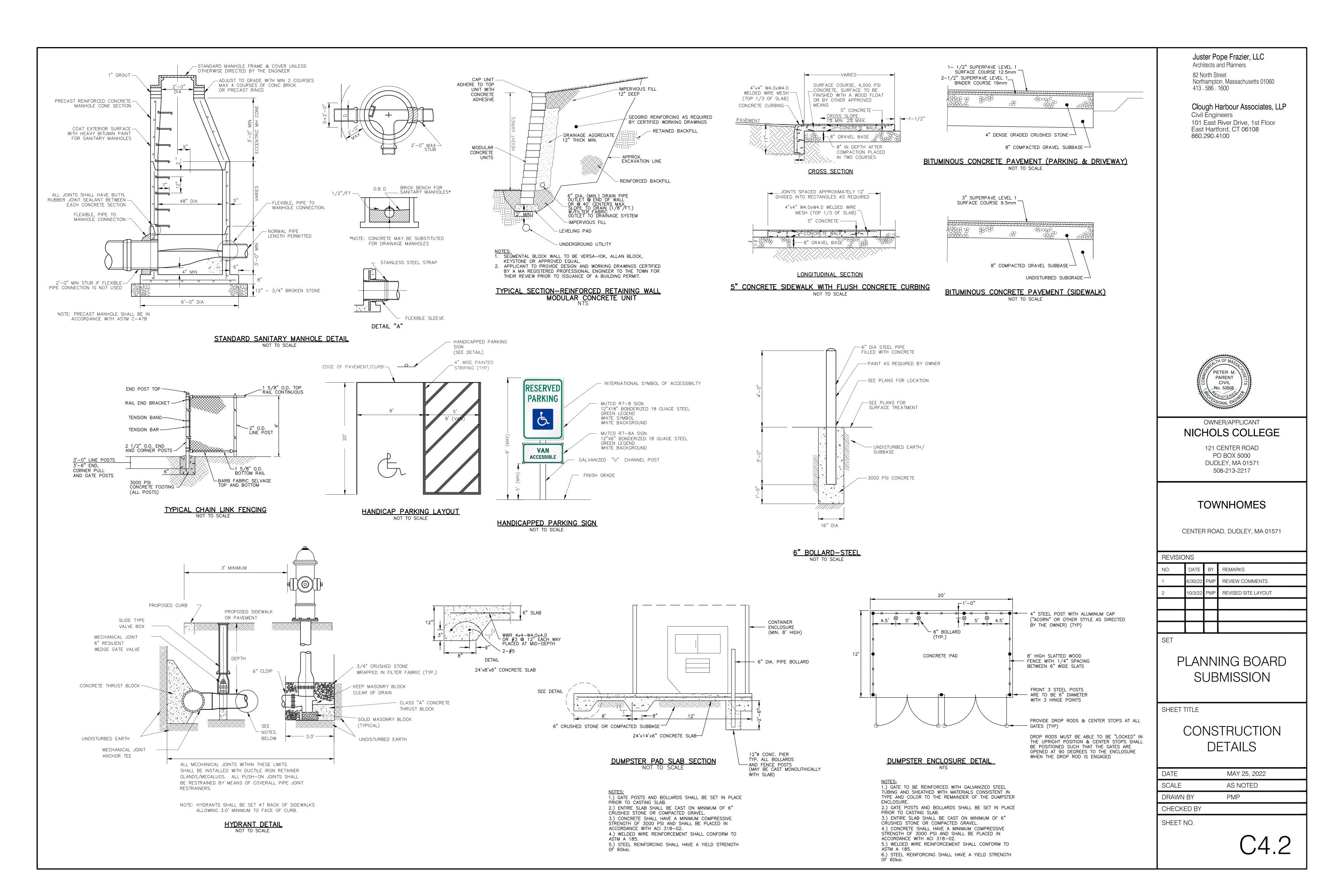












EROSION AND SEDIMENTATION CONTROL DETAILS EACH DUMP STRAPS RESTRAINT (1/4" NYLON ROPE 2" FLAT WASHERS) **INSTALLATION DETAIL BAG DETAIL** 1" REBAR FOR BAG REMOVAL — FROM INLET PROVIDE & MAINTAIN CONSTRUCTION ENTRANCE __ LOCATION TO BE DETERMINED AT TIME OF CONSTRUCTION (TYP, SEE DETAILS) SILTSACK-PROVIDE & MAINTAIN CATCH BASIN INLET PROTECTION THROUGHOUT CONSTRUCTION (TYP, SEE DETAILS) INLET SEDIMENT CONTROL DEVICE NOT TO SCALE SILT FENCE CHECK. SEE SILT — FENCE SPECIFICATIONS. MAP 227 PARCEL 70 N/F THOMAS G. & SANDRA SMITH BOOK 24388 PAGE 209 1.5"x1.5"x42" STAKE DRIVEN ON — DOWNSLOPE SIDE OF TRENCH BELOW GRADE ANGLE STAKE 2° - 20° UPSLOPE SET STAKE 12" MINIMUM INTO GRADE STAKED HAYBALES MAY BE SUBSTITUTED FOR SILT FENCE SILT FENCE LOCATED— 5—10' FROM TOE OF SLOPE BACKFILLED TRENCH SILT FENCE AT TOE OF SLOPE APPLICATION NOT TO SCALE APPROXIMATE MATERIAL STOCKPILE LOCATION CONTRACTOR TO ADJUST AS REQUIRED THROUGHOUT CONSTRUCTION PROVIDE & MAINTAIN A CONTINUOUS LINE OF SILT FENCE THROUGHOUT CONSTRUCTION (TYP, SEE DETAILS) (TYP, SEE DETAIL) GRAPHIC SCALE IN FEET FABRIC 6" MINIMUM STONE DEPTH CONSTRUCTION ENTRANCE PAD STRAW WATTLE NOTES: 1. SET POST AND 2. ATTACH FILTER FABRIC EXCAVATE A 6" X 6" UPSWEEP FOR POSTS TO THE POSTS AND 1. BEGIN AT THE LOCATION WHERE THE WATTLE IS TO BE INSTALLED BY EXCAVATING A 2-3" DEEP BY 9" WIDE TRENCH ALONG THE CONTOUR OF THE SLOPE. EXCAVATION SOIL SHOULD BE PLACED UP-SLOPE FROM TRENCH, SET POST EXTEND IT 8" INTO THE STABILITY AND DOWN SLOPE TRENCH. SELF CLEANING THE ANCHOR TRENCH. 2. PLACE THE WATTLE IN THE TRENCH SO THAT IT CONTOURS TO THE SOIL SURFACE. COMPACT THE SOIL FROM THE EXCAVATED TRENCH AGAINST THE WATTLE ON THE UPHILL SIDE. ADJACENT WATTLES SHOULD TIGHTLY TRENCH TO BE 6" IIII = IIII = IIII = WIDE BY 6" HIGH_____ TYPICAL WATTLE SPACING BASED ON SLOPE GRADIENT 3. POSITION POSTS TO OVERLAP AS SHOWN, POSTS TAKENG CERTAIN THAT FABRIC FOLDS AROUND EACH POST ONE FULL TURN. 5. BACKFILL THE TRENCH 3. SECURE THE WATTLE WITH 24" LONG STAKES EVERY 3-4' WITH A STAKE ON EACH END. STAKES SHOULD BE DRIVEN THROUGH THE MIDDLE OF THE WATTLES LEAVING 2-3" OF STAKE EXTENDING ABOVE. THE AND COMPACT THE COMPACTED 36" EXCAVATED SOIL.

VERTICAL SPACING IS

DEPENDENT ON SLOPE GRADIENT¹

BACKFILL - MAX

ELEVATION

PLACEMENT AND CONSTRUCTION OF A SILT FENCE

NOT TO SCALE

POINT "A" SHOULD BE HIGHER THAN POINT "B"

4. DRIVE POSTS TIGHTLY TOGETHER AND SECURE TOPS OF POSTS BY TYING OF WITH

CORD OR WIRE TO PREVENT FLOW-THROUGH

BOTTOM OF

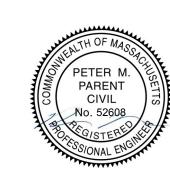
PLAN VIEW

DRAINAGEWAY

OF BUILT-UP SEDIMENT AT JOINT.

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SHEET TITLE

WATTLE STAKES SHOULD BE DRIVEN PERPENDICULAR TO

4. SECURE WATTLES PLACED ON PAVED SURFACES WITH SANDBAGS SPACED AT AN INTERVAL SUFFICIENT TO PREVENT MOVEMENT OF WATTLE AND TO ENSURE THAT

ENDS OF ADJACENT WATTLES REMAIN TIGHTLY ABUTTED.

THE SLOPE FACE.

DRIVE STAKE
PERPENDICULAR TO
SLOPE FACE UNTIL
2—3" REMAINS EXPOSED

-INSTALL WATTLE WITH
24" LONG 1" X 1" WOOD STAKES

COMPAC EXCAVATED SO

SET WATTLE IN A 2-3" TRENCH

STRAW WATTLE INSTALLATION

ENRICHMENT DETAIL

- ADJACENT WATTLES SHALL TIGHTLY ABUT AND STAKE END OF EACH WATTLE. ON PAVED SURFACES OVERLAP ENDS (2'MIN.)

TYPICAL WATTLE INSTALLATION GUIDE

EROSION & SEDIMENT CONTROL PLAN

DATE	MAY 25, 2022
SCALE	AS NOTED
DRAWN BY	PMP
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SHEET NO.

EROSION AND SEDIMENTATION CONTROL NARRATIVE & NOTES

PROJECT NARRATIVE

THIS PROJECT CONSISTS OF CONSTRUCTING TWO NEW STUDENT HOUSING RESIDENCES ON AT THE SOUTH END OF THE NICHOLS COLLEGE CAMPUS IN DUDLEY, MASSACHUSETTS. THE LOCATION OF THE SITE IS ON THE WEST SIDE OF CENTER ROAD APPROXIMATELY 1,500' SOUTH OF ITS INTERSECTION WITH HEALY ROAD. THIS PROJECT WILL CONSIST OF TWO NEW RESIDENCES, ASSOCIATED PARKING AND ACCESS DRIVEWAYS, CONCRETE SIDEWALKS, RETAINING WALLS, DRAINAGE PIPING AND STRUCTURES, AND UNDERGROUND UTILITIES.

IT IS ANTICIPATED THAT APPROXIMATELY 4 ACRES OF THE 25.6 ACRE SITE WILL BE DISTURBED DURING THE CONSTRUCTION OF THE FACILITY.

THE PROJECT SHALL BE DEVELOPED IN A SINGLE PHASE, HOWEVER, DISTURBED AREAS SHALL BE STABILIZED AT MILESTONE POINTS DURING CONSTRUCTION. ALL WORK SHALL BE SCHEDULED SUCH THAT STABILIZATION COINCIDES WITH THE ABILITY TO VEGETATE DISTURBED AREAS, APRIL 1 THROUGH JUNE 15 AND AUGUST 15 THROUGH OCTOBER 1.

THIS PROJECT REQUIRES THE FOLLOWING PERMITS: PLANNING & ZONING MAJOR SITE PLAN REVIEW

ESTIMATED CONSTRUCTION SCHEDULE

- A. INSTALL EROSION AND SEDIMENT CONTROL SYSTEMS APRIL 2023
- B. ROUGH GRADE SITE MAY 2023
- C. INSTALL STORMWATER AND UTILITY SYSTEMS MAY THRU AUGUST 2023
- D. CONSTRUCT BUILDING STRUCTURES MAY 2023 THRU AUGUST 2024
- E. FINISH GRADE SITE AND INSTALL LANDSCAPING JUNE/JULY 2024

GENERAL NOTES

- A. ELEVATIONS ARE BASED ON AN ASSUMED DATUM.
- B. ALL UTILITIES SHALL BE APPROVED BY LOCAL UTILITY COMPANIES PRIOR TO CONSTRUCTION; ALL UTILITIES SHALL BE CONSTRUCTED TO UTILITY COMPANY SPECIFICATIONS.
- C. ALL CONSTRUCTION SHALL BE TO TOWN SPECIFICATIONS & REGULATIONS.
- D. NO CHANGES CAN BE MADE TO THESE PLANS WITHOUT THE TOWN'S APPROVAL.
- E. CONTRACTOR SHALL OBTAIN ALL REQUIRED LOCAL & STATE PERMITS PRIOR TO BEGINNING ANY CONSTRUCTION.
- F. FIELD CHANGES SHALL HAVE PRIOR APPROVAL OF THE TOWN.
- G. CATCH BASIN TOPS SHALL NOT BE CEMENTED DOWN UNTIL FINAL GRADES ARE SET.
- H. UNLESS OTHERWISE NOTED OR SPECIFIED, ALL ROADWAYS & STORM DRAINAGE SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE COMMONWEALTH OF MASSACHUSETTS, D.O.T. "STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, 2020". SIMILARLY PERTINENT CONSTRUCTION DETAILS THAT ARE NOT INCLUDED WITH THESE DRAWINGS SHALL CONFORM TO THE COMMONWEALTH OF MASSACHUSETTS, D.O.T. STANDARD ROADWAY DRAWINGS.
- I. CONTRACTOR SHALL NOTIFY THE TOWN OF CONSTRUCTION SCHEDULE SO THAT INSPECTION MAY BE PROVIDED.
- J. UNDERGROUND UTILITY, STRUCTURE AND FACILITY LOCATIONS DEPICTED ON PLANS HAVE BEEN COMPILED, IN PART, FROM RECORD MAPPING SUPPLIED BY THE RESPECTIVE UTILITY COMPANIES OR GOVERNMENTAL AGENCIES, FROM PAROL TESTIMONY, FIELD MEASUREMENTS AND FROM OTHER SOURCES. THESE LOCATIONS MUST BE CONSIDERED APPROXIMATE IN NATURE. ADDITIONALLY, OTHER SUCH FEATURES MAY EXIST ON THE SITE, THE EXISTENCE OF WHICH ARE UNKNOWN TO CME ASSOCIATES, INC. THE SIZE, LOCATION AND EXISTENCE OF ALL SUCH FEATURES MUST BE FIELD DETERMINED AND VERIFIED BY THE APPROPRIATE AUTHORITIES PRIOR TO CONSTRUCTION.
- K. CONTACT "DIG SAFE" AT 1-888-344-7233. THREE WORKING DAYS PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITY.

SEEDING SPECIFICATIONS

- A. IF GROUND HAS BEEN PREVIOUSLY MULCHED, MULCH MUST BE REMOVED OR ADDITIONAL NITROGEN MUST BE ADDED.
- B. REMOVE ALL SURFACE STONES 2" OR LARGER AS WELL AS ALL DEBRIS SUCH AS WIRE, CABLE, TREE ROOTS, PIECES OF CONCRETE, CLODS, CLUMPS, OR OTHER UNSUITABLE MATERIAL.
- C. APPLY FERTILIZER AT 7.5 POUNDS PER 1,000 SQUARE FEET AND LIME AT 200 POUNDS PER 1,000 SQUARE FEET UNLESS SOIL TESTING FOR REQUIREMENTS IS PERFORMED.
- D. NO MOWING IS TO BE UNDERTAKEN UNTIL THE MAJORITY OF THE VEGETATION IS AT LEAST 6" HIGH. MOWING SHOULD CUT THE TOP 1/3 OF VEGETATION. DO NOT UNDER ANY CIRCUMSTANCES CUT VEGETATION BELOW 3".
- AT LEAST 4 TIMES.
- F. THESE SEEDING MEASURES ARE NOT TO BE USED ON SLOPES IN EXCESS OF 2:1 GRADING.

E. DO NOT APPLY ANY FORM OF WEED CONTROL UNTIL GRASS HAS BEEN MOWED

- G. PERMANENT SEEDING MEASURES ARE TO BE USED INSTEAD OF TEMPORARY SEEDING MEASURES WHERE WORK IS TO BE SUSPENDED FOR A PERIOD OF TIME LONGER THAN 1 YEAR.
- H. IF THERE IS NO EROSION, BUT SEED SURVIVAL IS LESS THAN 100 PLANTS PER SQUARE FOOT AFTER 4 WEEKS OF GROWTH, RE—SEED AS PLANTING SEASON ALLOWS.

CONSTRUCTION SEQUENCE

- A. STAKEOUT LIMIT OF DISTURBANCE.
- B. HOLD A PRECONSTRUCTION MEETING.
- C. CONTACT "DIG SAFE" AT 1-888-344-7233. THREE WORKING DAYS PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITY.
- D. INSTALL THE CONSTRUCTION ENTRANCE.
- E. INSTALL PERIMETER FILTER (SILT FENCE)
- F. PERFORM ALL NECESSARY CLEARING AND GRUBBING OPERATIONS.
- G. EXCAVATE & DISPOSE OF ALL STUMPS OFF SITE.
- H. STRIP ALL TOPSOIL WITHIN THE FOOTPRINT OF THE CONSTRUCTION SITE.
 STOCKPILE ALL TOPSOIL IN AN APPROVED AREA AND SECURE WITH EROSION AND
 SEDIMENT CONTROLS.
- I. ROUGH GRADE SITE.
- J. DIG FOUNDATIONS AND STOCKPILE MATERIAL AS REQUIRED.
- K. PRIOR TO INSTALLATION OF SURFACE WATER CONTROLS SUCH AS TEMPORARY DIVERSIONS AND STONE DIKES, INSPECT EXISTING CONDITIONS TO ENSURE DISCHARGE LOCATIONS ARE STABLE. IF NOT STABLE, REVIEW DISCHARGE CONDITIONS WITH THE DESIGN ENGINEER AND IMPLEMENT ADDITIONAL STABILIZATION MEASURES PRIOR TO INSTALLING WATER SURFACE CONTROLS.
- L. STABILIZE CUT AND FILL SLOPES.
- M. CONSTRUCT FOUNDATION AND ERECT STRUCTURES.
- N. INSTALL SERVICE UTILITIES.
- O. CONSTRUCT CONCRETE SIDEWALKS.
- P. FINISH GRADE ACCESS DRIVEWAYS & PARKING AREAS.
- Q. PLACE TOPSOIL WHERE REQUIRED. INSTALL PERIMETER LANDSCAPE
- R. FINISH GRADE SIDE SLOPES, SEED AND MULCH.
- S. UPON SUBSTANTIAL COMPLETION OF THE BUILDING, COMPLETE THE BALANCE OF SITE WORK AND STABILIZATION OF ALL OTHER DISTURBED AREAS.
- T. ALL REMAINING EXPOSED AREAS SHALL BE LOAMED, SEEDED AND MULCHED OR SODDED WITHIN 14 DAYS OF FINAL GRADING.
- U. REMOVE TEMPORARY EROSION AND SEDIMENT CONTROLS.
- V. CONTRACTOR TO REMOVE ANY ACCUMULATED SEDIMENT FROM DRAINAGE STRUCTURES OR BASINS.

NOTE: SEVERAL OF THE ABOVE ACTIVITIES MAY BE DONE SIMULTANEOUSLY.

EROSION & SEDIMENT CONTROL OPERATIONS AND MAINTENANCE

- A. EROSION AND SEDIMENTATION CONTROL AND RESTORATION MEASURES SHALL CONFORM TO THE "1997 MASSACHUSETTS EROSION AND SEDIMENT CONTROL GUIDELINES FOR URBAN AND SUBURBAN AREAS", PUBLISHED BY THE MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION, BUREAU OF RESOURCE PROTECTION; AND TO CITY REGULATIONS.
- B. INSTALLATION OF SEDIMENT AND EROSION CONTROLS SUCH AS WATTLES AND SILT FENCES SHALL BE ESTABLISHED PRIOR TO COMMENCING ANY LAND DISTURBANCE ACTIVITIES
- C. ALL STOCKPILED MATERIAL SHALL BE RINGED WITH WATTLES OR SILT FENCES.

 ANY MATERIAL TO BE STOCKPILED LONGER THAN 14 DAYS SHALL BE STABILIZED WITH TEMPORARY SEEDING OR JUTE NETTING.
- D. PAVEMENT AND CURBING SHOULD BE INSTALLED AS SOON AS POSSIBLE AFTER STORM DRAINAGE IS INSTALLED.
- E. CATCH BASINS SHALL BE PROTECTED FROM SEDIMENTATION UNTIL ALL AREAS ARE PERMANENTLY VEGETATED OR STABILIZED.
- F. CATCH BASIN SUMPS SHALL BE CLEANED OF SILT PERIODICALLY DURING CONSTRUCTION.
- G. WATTLES OR SILT FENCE SHALL BE PLACED 5—10 FEET FROM THE TOE OF ALL CRITICAL SLOPES AS SHOWN ON THE PLAN. THESE SHALL BE CHECKED BY THE CONTRACTOR REGULARLY AND REPAIRED WHENEVER THEY FAIL TO ENSURE CLEAN RUN—OFF FROM THE SITE.
- H. ADDITIONAL CONTROL MEASURES IF REQUESTED BY THE TOWN SHALL BE INSTALLED IMMEDIATELY UPON REQUEST.
- I. ALL DISTURBED AREAS SHALL BE PROTECTED WITH A MINIMUM VEGETATION COVER AS SHOWN IN ACCOMPANYING CHART.
- J. THE CONTRACTOR SHALL PLAN ALL LAND DISTURBING ACTIVITIES IN A MANNER
- AS TO MINIMIZE THE EXTENT OF THE DISTURBED AREAS.

 K. THE CONTRACTOR SHALL MAKE DAILY INSPECTIONS OF THE SITE TO INSURE EFFECTIVENESS OF EROSION AND SEDIMENTATION CONTROL MEASURES AND WILL
- IMMEDIATELY MAKE NECESSARY REPAIRS IF REQUIRED BY THE TOWN.

 L. ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE INSPECTED AT A MINIMUM OF ONCE A WEEK AND WITHIN 24 HOURS OF THE END OF A STORM
- WITH A RAINFALL AMOUNT OF 0.1 INCHES OR GREATER TO DETERMINE MAINTENANCE NEEDS.

 M. ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE REPLACED WITHIN
- 24 HOURS OF AN OBSERVED FAILURE.

 N. ALL CONSTRUCTION TRAFFIC SHALL ENTER AND LEAVE BY THE DESIGNATED

ENTRANCE. ALL SOIL, MISCELLANEOUS DEBRIS, OR OTHER MATERIAL SPILLED,

- DUMPED OR OTHERWISE DEPOSITED ON PUBLIC STREETS, HIGHWAYS, SIDEWALKS OR OTHER PUBLIC THOROUGHFARES DURING TRANSIT TO OR FROM THE SITE SHALL BE REMOVED PROMPTLY.

 O. THE CONTRACTOR HEREBY ACKNOWLEDGES HIS RESPONSIBILITY TO INSTALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES ON THIS SITE AND THAT HIS
- FAILURE TO INSTALL AND MAINTAIN THESE DEVICES COULD RESULT IN FINES OR SUSPENSION OF WORK BY THE TOWN.

P. MINIMIZE OR ELIMINATE ANY UNNECESSARY LAND DISTURBANCE OR CLEARING.

SILT FENCE SPECIFICATIONS

A. SYNTHETIC FILTER FABRIC SHALL BE A PERVIOUS SHEET OF PROPYLENE, NYLON, POLYESTER, ETHYLENE, OR SIMILAR FILAMENTS AND SHALL BE CERTIFIED BY THE MANUFACTURER OR SUPPLIER AS CONFORMING TO THE FOLLOWING MINIMUM REQUIREMENTS:

1. FILTERING EFFICIENCY 75 PERCENT (MIN)
2. GRAB TENSILE STRENGTH 100 POUNDS
3. ELONGATION AT FAILURE 15 PERCENT

4. MULLEN BURST STRENGTH 250 POUNDS PER SQUARE INCH

5. PUNCTURE STRENGTH6. APPARENT OPENING SIZE7. OPENING SIZE8. OPENING SIZE9.60mm10.60mm</

7. FLOW RATE 0.2 GALLONS PER SQUARE FOOT PER MINUTE

8. PERMITTIVITY 0.05 PER SECOND (MIN)

9. ULTRAVIOLET RADIATION STABILITY 70 PERCENT AFTER 500 HOURS OF EXPOSURE (MIN)

- B. STAKES ARE TO BE MADE OUT OF HARDWOOD WITH A MINIMUM CROSS SECTIONAL AREA OF 1.5 SQUARE INCHES OR STEEL POSTS WITH A MINIMUM WEIGHT OF 0.5 POUNDS PER LINEAR FOOT.
- C. TORN OR PUNCTURED GEOTEXTILES SHALL NOT BE USED.
- D. ON SLOPES WHERE SURFACE FLOW FOLLOWS THE SILT FENCE LINE, PERPENDICULAR SILT FENCE CHECKS SHALL BE INSTALLED AT 50 FOOT INTERVALS.
- LINES OF SILT FENCE SHOULD FOLLOW CONTOUR LINES 5—10 FEET DOWN GRADIENT FROM THE SLOPE. WHERE CONTOUR LINES CAN NOT BE FOLLOWED PERPENDICULAR WINGS SHOULD BE PLACED AT 50 FOOT INTERVALS.

PERSON RESPONSIBLE FOR MAINTAINING
CONTROL MEASURES DURING CONSTRUCTION.

NAME

ADDRESS

TELEPHONE #

MAINTENANCE LOG

LOCATION	DESCRIPTION	DATE	INITIALS
	-		
	1		
	+		
	<u> </u>		
PROJECT DATES	1	DATE	INITIALS
PROJECT GROUNDB	REAKING		
INAL STABILIZATIO	N		

STORMWATER OPERATION AND MAINTENANCE

STORMWATER FACILITY

OPERATION AND MAINTENANCE PLAN:

CONSTRUCTION PHASE

GENERAL PROVISIONS:

- 1. CONTRACTOR TO INSTALL AND MAINTAIN DRAINAGE FACILITIES AS SHOWN ON THE PLAN SET.
- 2. PRIOR TO CONSTRUCTION, ALL EROSION/SILTATION CONTROL DEVICES SHOWN ON ABOVE PLAN SHALL BE INSTALLED. TO PREVENT SILT INTRUSION INTO THE DRAINAGE SYSTEM DURING CONSTRUCTION, THE CONTRACTOR IS TO INSTALL INLET PROTECTION AT ALL CATCH BASINS AND SET SILT FENCE AT ALL SLOPES WHICH MAY ERODE IN THE DIRECTION OF ANY OPEN DRAINAGE FACILITIES. SUCH PREVENTIVE MEASURES ARE TO BE MAINTAINED THROUGHOUT THE CONSTRUCTION PROCESS.
- 3. EROSION CONTROLS ARE TO BE INSPECTED ON A DAILY BASIS. UPON DISCOVERY, THE CONTRACTOR SHALL REMOVE ANY SEDIMENT FROM AN EROSION CONTROL STRUCTURE.
- 4. ALL EXPOSED SOILS SHALL BE IMMEDIATELY STABILIZED TO PREVENT EROSION.
- 5. UPON INSTALLATION OF CATCH BASINS, INLET PROTECTION SHALL BE INSTALLED AND MAINTAINED UNTIL READY FOR PAVING.
- 6. PRIOR TO CONSTRUCTION OF IMPERVIOUS AREAS, ALL DRAINAGE STRUCTURES AND PIPES SHALL BE INSTALLED AND INSPECTED FOR PROPER FUNCTION. DURING CONSTRUCTION OF OTHER SITE FEATURES, DRAINAGE FACILITIES SHALL BE INSPECTED ON A DAILY BASIS AND CLEANED/REPAIRED IMMEDIATELY UPON DISCOVERY OF SEDIMENT BUILD—UP OR DAMAGE.
- 7. AFTER PAVING IS INSTALLED, IT SHALL BE SWEPT CLEAN ON A MONTHLY BASIS.

CATCH BASIN SUMPS:

- 1. CONTRACTOR TO INSPECT WEEKLY OR AFTER EACH 0.5 INCH RAIN EVENT AND CLEAN AS NEEDED.
- 2. CONTRACTOR SHALL CLEAN SUMPS AFTER SITE IS COMPLETELY STABILIZED AND PRIOR TO TRANSFER TO OWNER.

HYDRODYNAMIC OIL & PARTICLE SEPARATOR:

1. PRIOR TO TURNOVER TO OWNER THE OIL WATER SEPARATOR WILL BE CLEANED USING A VACUUM TRUCK OR OTHER ORDINARY CATCH BASIN CLEANING EQUIPMENT. THE DEBRIS WILL BE REMOVED FROM THE SITE AND DISPOSED OF ACCORDING TO ALL LOCAL, STATE, AND FEDERAL REGULATIONS. THIS WORK WILL BE DONE BY A LICENSED HAULER OF CONTAMINATED MATERIALS.

WATER QUALITY BASIN:

- 1. CONTRACTOR TO INSPECT WEEKLY OR AFTER EACH 0.5 INCH RAIN EVENT.
- 2. INSPECTIONS SHOULD FOCUS ON THE DURATION OF STANDING WATER IN THE BASIN. (PONDING AFTER 48 HOURS INDICATES POSSIBLE CLOGGING OF THE BOTTOM OF THE BASIN)
- 3. CONTRACTOR SHALL CLEAN INSPECT DETENTION SYSTEM AFTER SITE IS COMPLETELY STABILIZED AND PRIOR TO TRANSFER TO OWNER.

POST-DEVELOPMENT PHASE

GENERAL PROVISIONS:

SNOW STOCKPILING:

SNOW ACCUMULATIONS REMOVED FROM DRIVEWAYS AND PARKING AREAS SHALL BE PLACED IN UPLAND AREAS, WHERE SAND AND DEBRIS WILL REMAIN AFTER SNOW MELT FOR LATER REMOVAL. CARE SHOULD BE TAKEN NOT TO DEPOSIT SNOW IN THE IMMEDIATE VICINITY OF CATCH BASINS, DRAINAGE SWALES, OR SLOPES LEADING TO BODIES OF WATER, AND DRINKING WATER WELL SUPPLIES.

PAVEMENT SWEEPING:

DRIVEWAYS AND PARKING AREAS SHOULD BE SWEPT CLEAN AT LEAST TWICE ANNUALLY, WITH ONE SWEEPING PREFERABLY OCCURRING IMMEDIATELY AFTER WINTER SNOW MELT AND BEFORE SPRING RAINS. SWEEPING DURING THIS PERIOD CAPTURES PEAK SEDIMENT LOADS AND EXTENDS THE SERVICE LIFE OF THE STORM WATER MANAGEMENT SYSTEM.

CATCH BASIN SUMPS:

SOON AS POSSIBLE BEFORE SPRING RAINS. IN GENERAL, A CATCH BASIN SHOULD BE CLEANED IF THE DEPTH OF DEPOSITS IS GREATER THAN ONE HALF THE SUMP DEPTH. IF A CATCH BASIN SIGNIFICANTLY EXCEEDS THIS STANDARD THEN MORE FREQUENT CLEANINGS SHALL BE SCHEDULED. IN AREAS WITH HIGHER POLLUTANT LOADINGS OR DISCHARGES INTO SENSITIVE BODIES OF WATER, MORE FREQUENT CLEANINGS WILL BE NECESSARY.

CATCH BASINS SHALL BE INSPECTED BI-ANNUALLY AND CLEANED AT LEAST ANNUALLY, AFTER THE SNOW AND ICE SEASON, AND AS

HYDRODYNAMIC OIL & PARTICLE SEPARATOR:

THE OIL WATER SEPARATOR WILL BE INSPECTED QUARTERLY FOR THE PRESENCE OF ACCUMULATED OIL AND GREASE, FLOATABLES AND SEDIMENT, IF FOUND, THE STRUCTURE WILL BE CLEANED USING A VACUUM TRUCK OR OTHER ORDINARY CATCH BASIN CLEANING EQUIPMENT. THE DEBRIS WILL BE REMOVED FROM THE SITE AND DISPOSED OF ACCORDING TO ALL LOCAL, STATE, AND FEDERAL REGULATIONS. THIS WORK WILL BE DONE BY A LICENSED HAULER OF CONTAMINATED MATERIALS. THE SCHEDULE OF INSPECTIONS WILL BE ADJUSTED TO AN ANNUAL INSPECTION IF NO OIL OR GREASE IS FOUND ON A REGULAR BASIS. OWNER WILL BE RESPONSIBLE FOR THE INSPECTIONS AND CLEANING.

WATER QUALITY BASIN

WATER QUALITY BASIN SHALL BE INSPECTED AT LEAST TWICE ANNUALLY AND AFTER ALL MAJOR STORMS TO ENSURE THAT IT IS OPERATING AS INTENDED. PRETREATMENT BMP'S SHALL BE INSPECTED AND CLEANED DURING THE REGULAR BI—ANNUAL INSPECTIONS. POTENTIAL PROBLEMS THAT SHOULD BE CHECKED INCLUDE:

PONDINGEROSION

• CLOGGING OF INLET AND OUTLET PIPES

ANY NECESSARY REPAIRS SHALL BE MADE IMMEDIATELY. TRASH SHALL BE REMOVED AND THE BANKS, OF BASINS, MOWED AT LEAST
TWICE PER YEAR. (MOWING SHOULD BE PERFORMED WHEN GROUND IS DRY TO AVOID RUTS AND COMPACTION) SEDIMENT SHALL BE
REMOVED FROM THE BASIN AND PRETREATMENT AREA AS NECESSARY, AND AT LEAST ONCE EVERY FIVE YEARS.

RECORD KEEPING

RECORDS SHALL BE MAINTAINED BY THE OWNER AT THEIR OFFICES & SHALL DOCUMENT ALL ROUTINE & EMERGENCY MAINTENANCE WORK PERFORMED TO THE STORMWATER MANAGEMENT SYSTEM & SHALL BEAR THE SIGNATURE OF THE INDIVIDUAL SUPERVISING THE WORK. THESE RECORDS & THE SITE, SHALL BE MADE AVAILABLE TO THE TOWN FOR INSPECTION UPON REQUEST IN ORDER TO ENSURE COMPLIANCE WITH THIS PLAN.

SUGGESTED SEEDING MIXTURES AND PRACTICES

AREAS WHERE SEED MIX APPLIES	SEEDING MIXTURES BY WEIG	GHT	RATE PER 1,000 SQ. FT.	SEEDING DATES
ALL LAWN AREAS	RED FESCUES KENTUCKY BLUEGRASS PERENNIAL RYEGRASS	45% 45% 10%	1 LBS.	APRIL 1 — JUNE 15 OR AUG. 15 — OCT. 1
ROAD CUTS, FILLS, DIVERSION DITCHES, & STORMWATER BASINS	KENTUCKY TALL FESCUE REDTOP CREEPING RED FESCUE	47% 6% 47%	0.95 LBS.	APRIL 1 – JUNE 15 OR AUG. 15 – OCT. 1

WHERE TREES ARE TO BE RETAINED, THE SEED MIXTURE SHOULD BE ADAPTED FOR SHADY CONDITIONS.

TEMPORARY SEEDING	ANNUAL RYEGRASS OR PERENNIAL RYEGRASS	1-1/2 LBS.	WITHIN 7 DAYS AFTER SUSPENSION OF

Juster Pope Frazier, LLC
Architects and Planners
82 North Street

413 586 1600

Northampton, Massachusetts 01060

Clough Harbour Associates, LLP Civil Engineers 101 East River Drive, 1st Floor East Hartford, CT 06108 860.290.4100



OWNER/APPLICANT NICHOLS COLLEGE

121 CENTER ROAD PO BOX 5000 DUDLEY, MA 01571 508-213-2217

TOWNHOMES

CENTER ROAD, DUDLEY, MA 01571

REVISIO	NS		
NO.	DATE	BY	REMARKS
1	6/30/22	PMP	REVIEW COMMENTS
2	10/3/22	PMP	REVISED SITE LAYOUT

PLANNING BOARD

SUBMISSION

SHEET TITLE

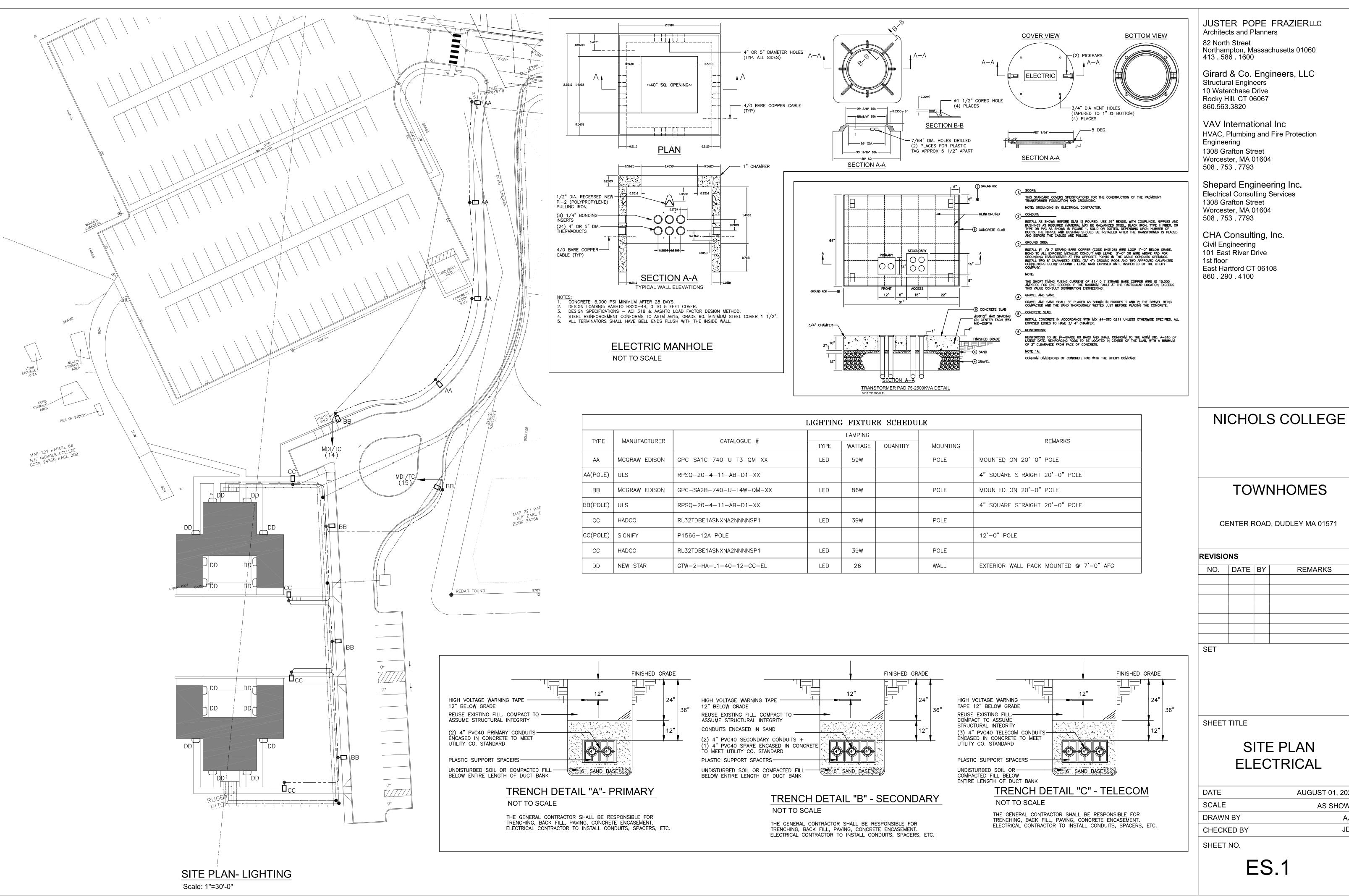
EROSION & SEDIMENT CONTROL PLAN

DATE	MAY 25, 2022	
SCALE	AS NOTED	
DRAWN BY	PMP	
CHECKED BY		

SHEET NO.

GRADING WORK

C5.



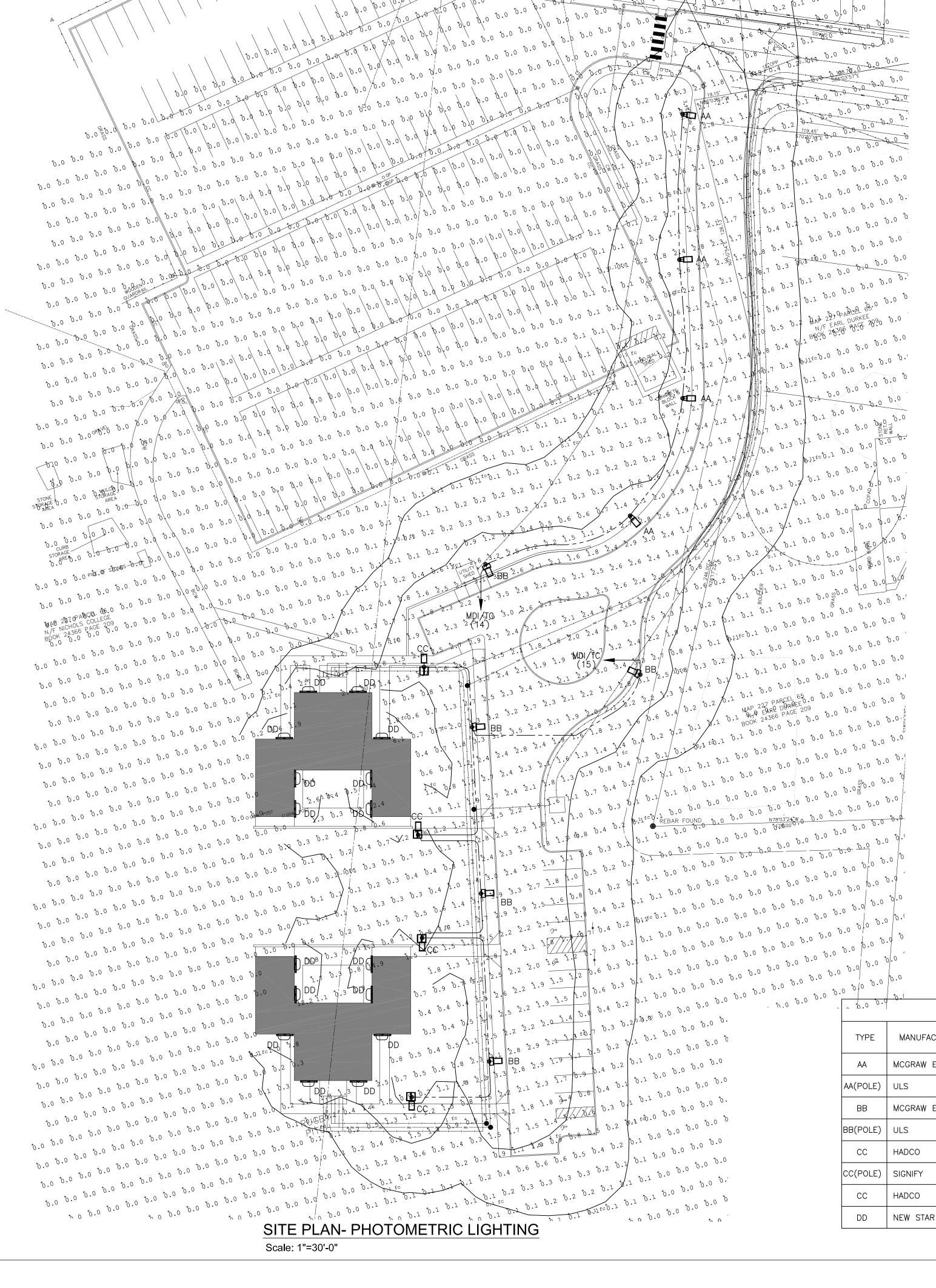
JUSTER POPE FRAZIERLLC

CENTER ROAD, DUDLEY MA 01571

REVISIO	NS		
NO.	DATE	BY	REMARKS

SITE PLAN

	DATE	AUGUST 01, 2022
	SCALE	AS SHOWN
	DRAWN BY	AJV
	CHECKED BY	JDS



LIGHTING FIXTURE SCHEDULE LAMPING MANUFACTURER CATALOGUE # REMARKS | WATTAGE | QUANTITY MOUNTING LED MOUNTED ON 20'-0" POLE MCGRAW EDISON GPC-SA1C-740-U-T3-QM-XX 59W RPSQ-20-4-11-AB-D1-XX 4" SQUARE STRAIGHT 20'-0" POLE LED MCGRAW EDISON GPC-SA2B-740-U-T4W-QM-XX POLE MOUNTED ON 20'-0" POLE 4" SQUARE STRAIGHT 20'-0" POLE RPSQ-20-4-11-AB-D1-XX HADCO LED 39W RL32TDBE1ASNXNA2NNNNSP1 POLE SIGNIFY P1566-12A POLE 12'-0" POLE HADCO RL32TDBE1ASNXNA2NNNNSP1 LED 39W POLE LED EXTERIOR WALL PACK MOUNTED @ 7'-0" AFG NEW STAR GTW-2-HA-L1-40-12-CC-EL 26 WALL

JUSTER POPE FRAZIERLLC Architects and Planners 82 North Street Northampton, Massachusetts 01060 413 586 1600

Girard & Co. Engineers, LLC Structural Engineers 10 Waterchase Drive Rocky Hill, CT 06067 860 563 3820

VAV International Inc. HVAC, Plumbing and Fire Protection Engineering 1308 Grafton Street Worcester, MA 01604 508 753 7793

Shepard Engineering Inc. Electrical Consulting Services 1308 Grafton Street Worcester, MA 01604 508 . 753 . 7793

CHA Consulting, Inc. Civil Engineering 101 East River Drive 1st floor East Hartford CT 06108 860 . 290 . 4100

NICHOLS COLLEGE

TOWNHOMES

CENTER ROAD, DUDLEY MA 01571

REVISIONS			
NO.	DATE	BY	REMARKS
SET	•		

SHEET TITLE

SITE PLAN PHOTOMETRIC

DATE	AUGUST 01, 2022
SCALE	AS SHOWN
DRAWN BY	AJV
CHECKED BY	JDS
	<u> </u>

SHEET NO. ES.1 PHOTOM