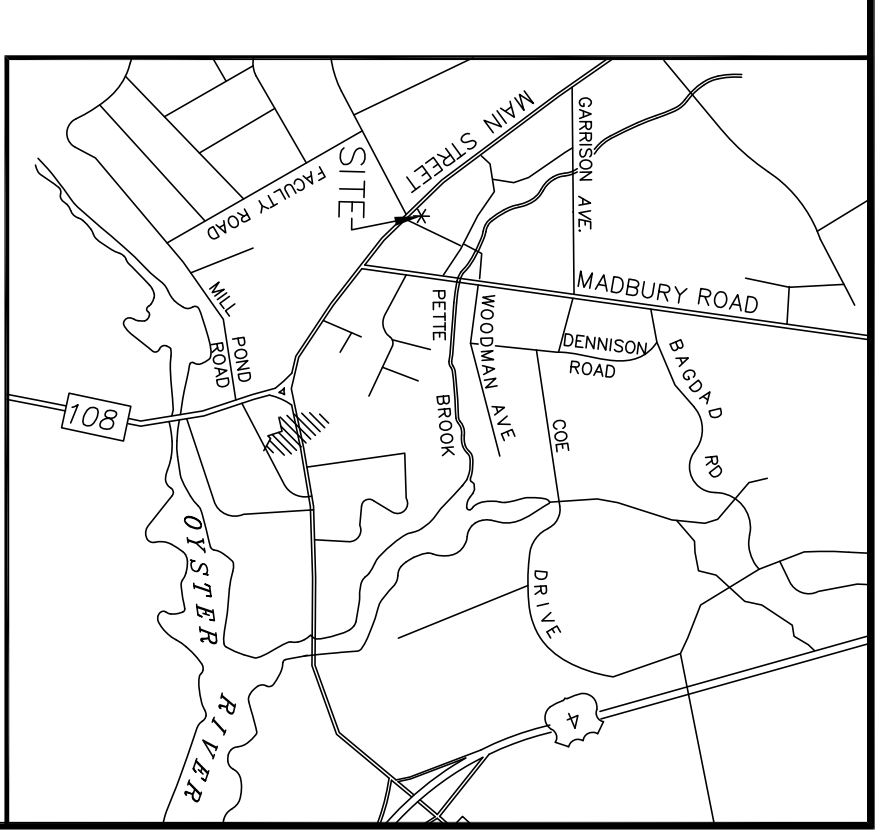


DEMOLITION AND CONSTRUCTION OF ADDITION

for
DOUG CLARK
 60 MAIN STREET
 DURHAM, NH
 MAY 16, 2019



LEGEND

	EXISTING FENCE
	EXISTING CONTOUR LINE
	PROPOSED CONTOUR LINE
	PROPOSED PAVEMENT SAWCUT
	PROPOSED SPOT GRADE
	PROPOSED SLOPE DOWN
	EXISTING SIGN
	EXISTING UTILITY POLE
	EXISTING LIGHT
	EXISTING CATCH BASIN
	EXISTING FIRE HYDRANT
	TOP OF CURB
	BOTTOM OF CURB
	TYPICAL
	TO BE REMOVED
	PROPOSED PAVEMENT

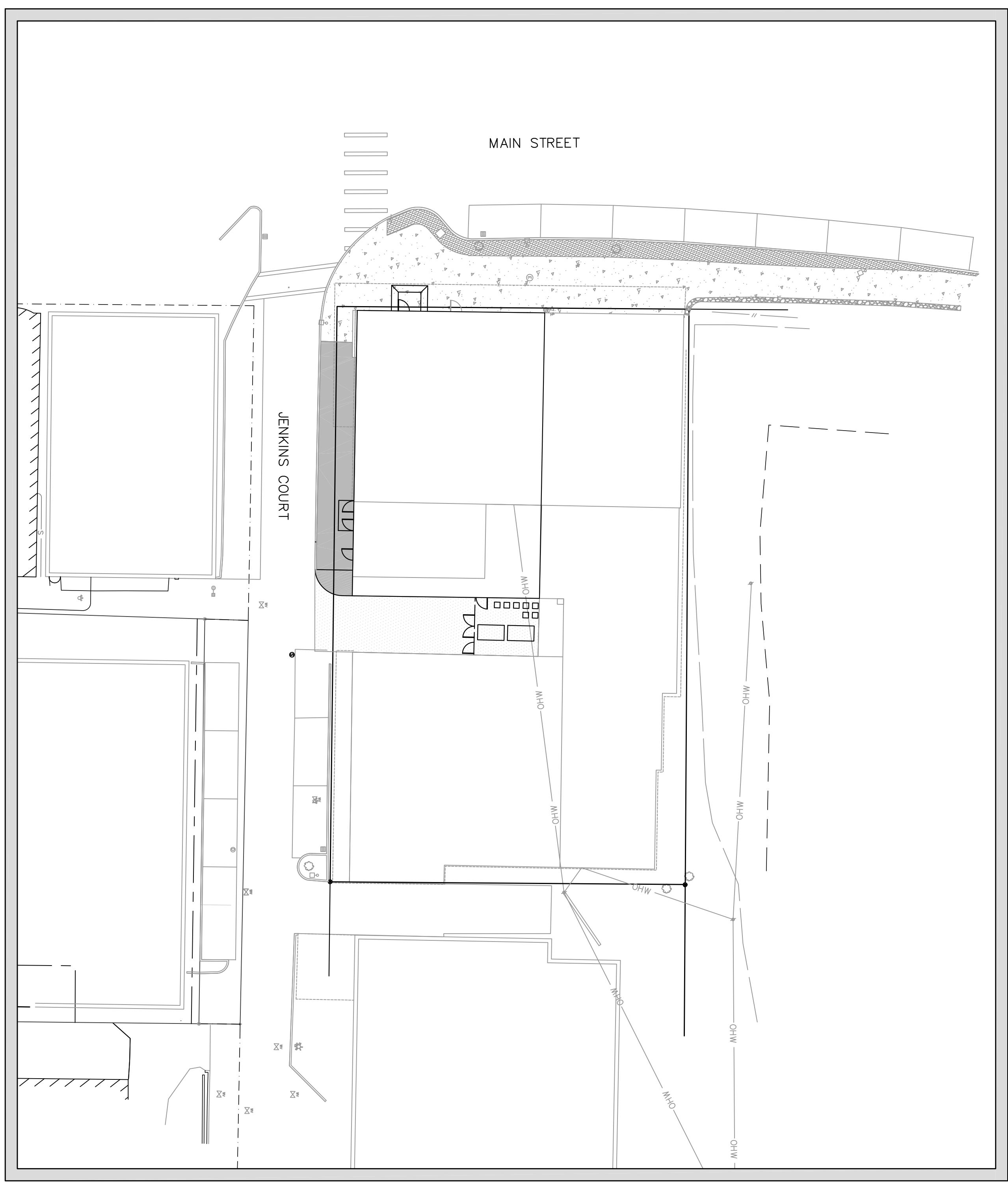


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OWNER

80 MAIN ST. E., LLC
 57 MAIN STREET
 DURHAM, NH
 S.C.R.D. BOOK 4459, PAGE 2587

CIVIL/STRUCTURAL ENGINEER



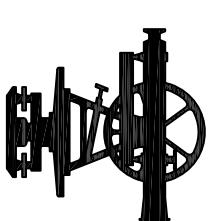
SURVEYOR

NORWAY PLAINS ASSOCIATES, INC.
 2 CONTINENTAL BOULEVARD
 ROCHESTER, NEW HAMPSHIRE
 03867 (603) 335-3948

ARCHITECT

THA ARCHITECT, LLC
 105 WILLOW BROOK AVE.
 STRATHAM, NH 03885
 603-770-2491

NO.	REVISIONS	DATE	INT.
0	INITIAL SUBMISSION TO DURHAM PLANNING BOARD	5/16/19	EHK

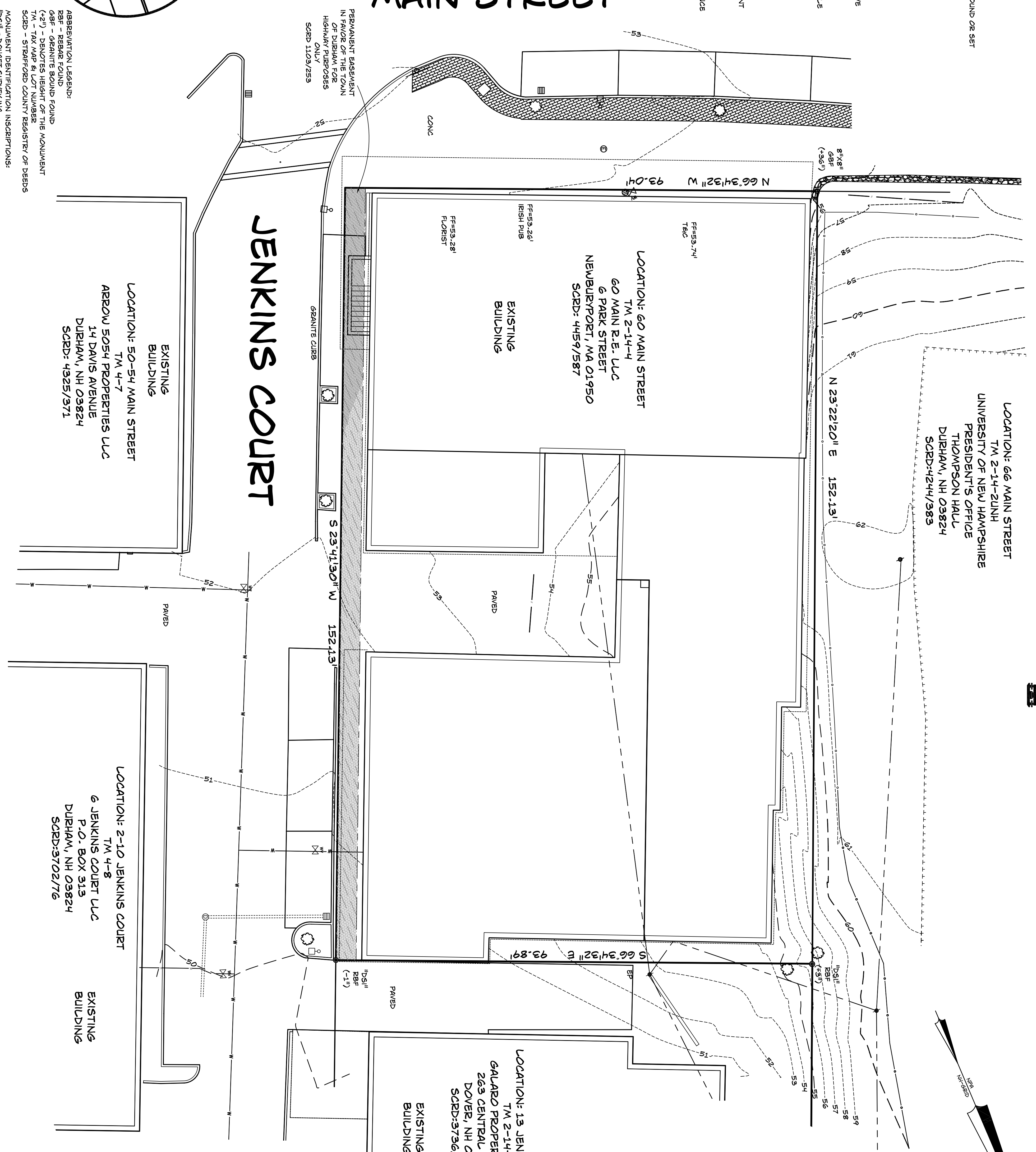


- LEGEND
- EXISTING MONUMENT
 - BOUND
 - NO MONUMENT FOUND OR SET
 - UTILITY POLE
 - DECIDUOUS TREE
 - ARTICAL BASIN
 - FIREHYDRANT
 - WATER SHUTOFF
 - WATER GATE VALVE
 - DRAIN MANHOLE
 - ELECTRIC MANHOLE
 - STREET LIGHT
 - PROPERTY LINE
 - STONEWALL
 - EP
 - EDGE OF PAVEMENT
 - OVERHEAD WIRES
 - CHAIN LINKED FENCE
 - EASEMENT
 - EDGE OF GRAVEL
 - FENCE



MAIN STREET

JENKINS COURT



LOCATION: 66 MAIN STREET
 TM 2-14-20NH
 UNIVERSITY OF NEW HAMPSHIRE
 PRESIDENT'S OFFICE
 THOMPSON HALL
 DURHAM, NH 03824
 SCRD:4244/383

LOCATION: 60 MAIN STREET
 TM 2-14-4
 60 MAIN P.E. LLC
 6 PARK STREET
 NEWBURYPOR, MA 01950
 SCRD: 4459/587

EXISTING BUILDING

EXISTING BUILDING
 LOCATION: 50-54 MAIN STREET
 TM 4-7
 ARROW 5054 PROPERTIES LLC
 14 DAVIS AVENUE
 DURHAM, NH 03824
 SCRD: 4325/371

EXISTING BUILDING
 LOCATION: 2-10 JENKINS COURT
 TM 4-8
 6 JENKINS COURT LLC
 P.O. BOX 313
 DURHAM, NH 03824
 SCRD:3702/176

EXISTING BUILDING
 LOCATION: 13 JENKINS COURT
 TM 2-14-3
 GARARD PROPERTIES LLC
 263 CENTRAL AVENUE
 DOVER, NH 03820
 SCRD:3736/885

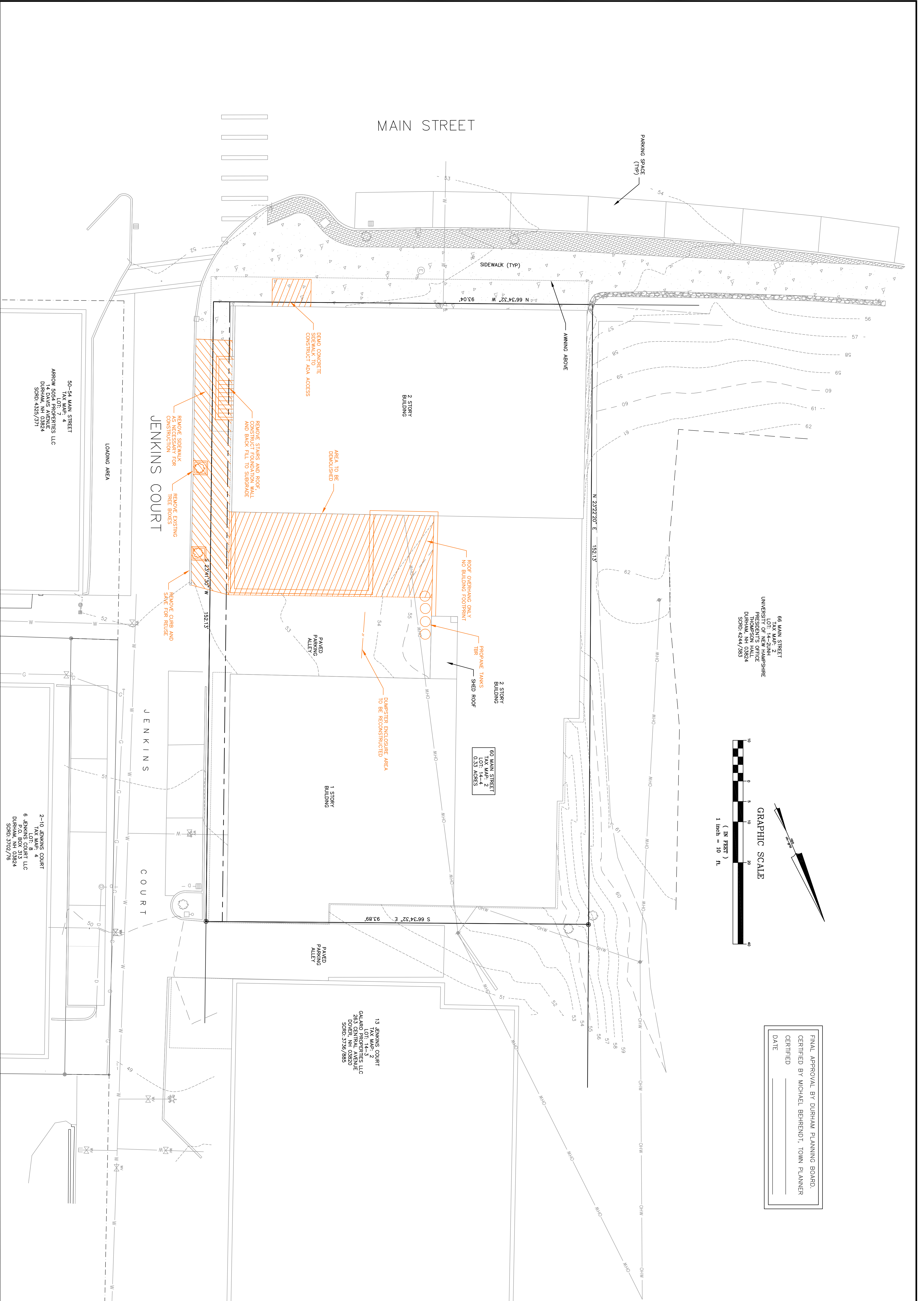
TM 2-14-4
 OWNER OF RECORD:
 60 MAIN P.E. LLC
 6 PARK STREET
 NEWBURYPOR, MA 01950
 SCRD: 4459/587
 11 TOWN & CAMPUS II
EXISTING FEATURES PLAN
 60 MAIN ST. & JENKINS CT.
 DURHAM
 STRAFFORD COUNTY, NH
 FOR: 60 MAIN P.E., LLC
 1"=10' SEPT. 2017

- REFERENCE PLANS:
1. "PLAN OF LAND FOR BEAT R. WHITMORE, JENKINS COURT, DURHAM, NEW HAMPSHIRE" DATED: JANUARY 8, 1997 BY DOUGLET SURVEYING, INC. RECORDED: SCRD 46-24
 2. "BOUNDARY LINE ADJUSTMENT PLAN, GAMMA THETA CORP., MAIN STREET, DURHAM, NH 03824, STRAFFORD COUNTY" DATED: 1-9-04 BY COMMETT ENGINEERS RECORDED: SCRD 74-56
 3. "SITE SKETCH OF DA LAT VIENTHAMESE RESTAURANT FOR DAT LAT, LLC, JENKINS COURT, DURHAM, NEW HAMPSHIRE" DATED: 9/30/99 BY DOUGLET SURVEYING INC. ON FILE AT THE TOWN OF DURHAM
 4. "PLAN OF LAND DURHAM, N.H. OF DAVID A. DEMOULPIERED" DATED JANUARY 11, 1982 BY JOHN W. DURGIN ASSOCIATES, INC. SCRD PLAN #224-125.
 5. "PLAN OF SCHOOLWORKER LOTS, DURHAM, N.H." DATED: JULY 29, 1922 BY G.E. GERFINI RECORDED: SCRD 7-5-26
 6. "SITE PLAN FOR BREAKING NEW GROUND, 50B MAIN STREET, DURHAM, NEW HAMPSHIRE" DATED: REV. 9/23/97 BY ONEIL SURVEY AND ASSOCIATES
 7. "BOARDING HOUSE CONVERSION FROM APARTMENTS FOR SLAVINA ENTERPRISES, INC., JENKINS COURT AND PETTE BROOK LANE, DURHAM, NEW HAMPSHIRE" DATED: AUGUST 1995 BY K E M LAND SURVEY, INC. RECORDED: SCRD 53-24.
 8. "TOWN OF DURHAM, N.H. DEPT OF PUBLIC WORKS AREA TO BE ACQUIRED FROM DURGIN" DATED: JULY 1967 BY THOMAS WENHAM RECORDED SCRD BOOK 830, PAGE 482.
 9. "JENKINS COURT CONSTRUCTION PLAN" DATED: 1983 JUL, BY UNKNOWN RECORDED: SCRD 176-6
 10. "LIMITED SUBDIVISION, TOWN OF DURHAM TO NICHOLAS & BERTRICE DEANS DURHAM, NH" DATED: JAN 184 BY G.L. DAVIS ASSOC. RECORDED: SCRD 176-71

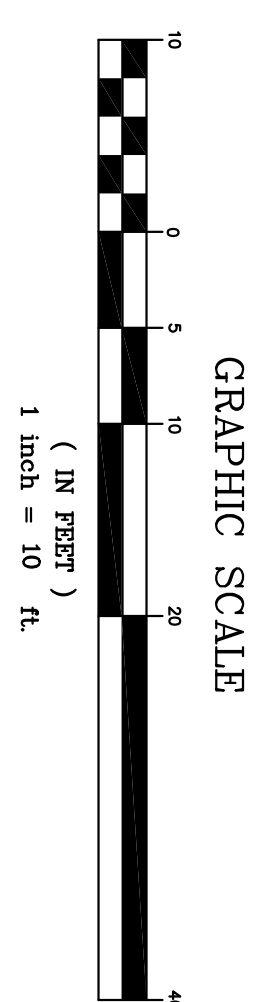
- NOTES:
1. TOTAL PARCEL AREA 144,2957/0.33 ACRES
 2. PARCEL IS ZONED CB - CENTRAL BUSINESS
 3. THE LOTS ARE SERVICED BY THE MUNICIPAL WATER AND SEWER SYSTEM.
 4. THE PROPOSED LOT IS/NOT LOCATED WITHIN THE 100 YEAR FLOOD ZONE AS SHOWN ON THE FLOOD INSURANCE RATE MAP DATED 5/17/05 COMMUNITY PANEL 3301770318D.
 5. PARCEL MAYBE SUBJECT BUT NOT LIMITED TO THE FOLLOWING EASEMENTS OR RIGHTS:
 NET SET POLE EASEMENT, SEE SCRD 635/359
 SEWER ENTRY APPLICATION AND CONTRACT, SEE SCRD 619/148
 HIGHWAY EASEMENT, SEE 1109/253



FILE NO. 329
 PLAN NO. C-2871-BF
 DWG. NO. 17094-LD/5F-1
 P.B. NO. "33" T.JP



66 MAIN STREET
 TAX MAP: 2
 LOT: 14-20NH
 UNIVERSITY OF NEW HAMPSHIRE
 PRESIDENT'S OFFICE
 THOMPSON HALL
 DURHAM, NH 03824
 SCRD: 424/353



FINAL APPROVAL BY DURHAM PLANNING BOARD.
 CERTIFIED BY MICHAEL BEHRENDT, TOWN PLANNER
 DATE _____

50-54 MAIN STREET
 TAX MAP: 4
 LOT: 14-20NH
 ARROW SQUARE PROPERTIES, LLC
 14 DAVIS AVENUE
 DURHAM, NH 03824
 SCRD: 4325/371

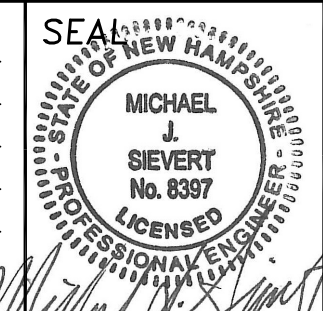
2-10 JENKINS COURT
 TAX MAP: 4
 LOT: 14-20NH
 6 JENKINS COURT LLC
 P.O. BOX 313
 DURHAM, NH 03824
 SCRD: 3702/75

13 JENKINS COURT
 TAX MAP: 2
 CALARO PROPERTIES LLC
 283 CENTRAL AVENUE
 DORR, NH 03820
 SCRD: 3750/585

60 MAIN STREET
 TAX MAP: 2
 LOT: 14-20NH
 0.33 ACRES

DEMOLITION PLAN
 prepared for
DOUG CLARK
 60 MAIN STREET
 DURHAM, NH

DATE: 5/16/18
 SCALE: 1"=10'
 DESIGNED BY: MJS
 DRAWN BY: EHK
 APPROVED BY: MJS
 DWG FILE:
 19-024 Civil.dwg



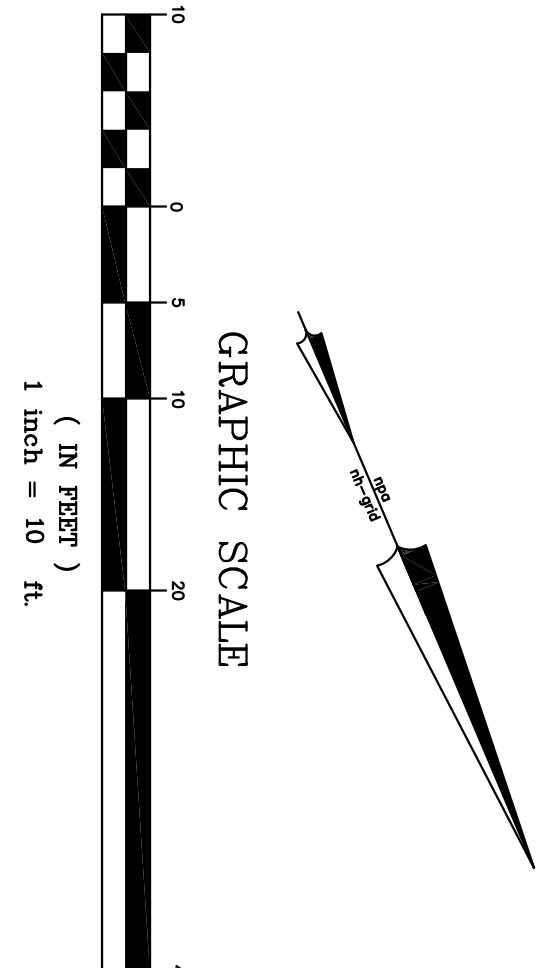
NO.	REVISIONS	DATE	INT.
0	INITIAL SUBMISSION TO DURHAM PLANNING BOARD	5/16/19	EHK

JOB: 19-024
C1

MJS ENGINEERING, P.C.
 CIVIL • STRUCTURAL • ENVIRONMENTAL
 5 RAILROAD ST., P.O. BOX 3559
 NEWBURY, NH 03857
 PHONE: (603) 659-4979, FAX: (603) 659-4627
 E-MAIL: MJS@MJS-ENGINEERING.COM

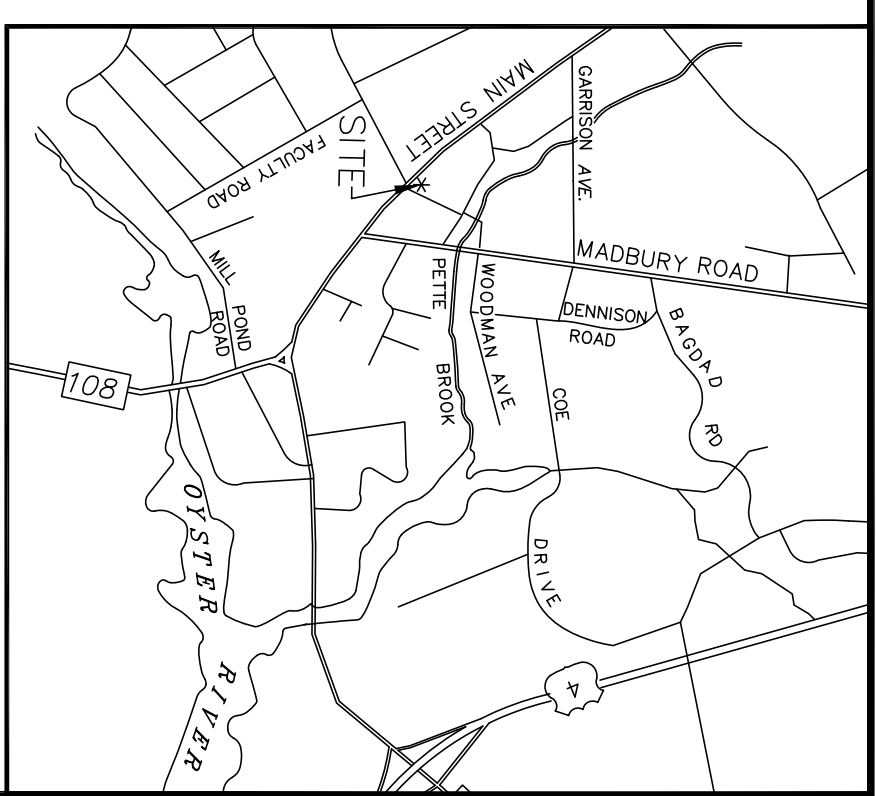


68 MAIN STREET
TAX MAP: 2
LOT: 1
UNIVERSITY OF NEW HAMPSHIRE
PRESIDENT'S OFFICE
THOMPSON HALL
DURHAM, NH 03824
SPOB: 44-1/383



FINAL APPROVAL BY DURHAM PLANNING BOARD.
CERTIFIED BY MICHAEL BEHRENDT, TOWN PLANNER
DATE _____

UTILITIES NOTE:
ALL ELECTRIC, GAS, TELEPHONE, WATER SEWER AND DRAIN SERVICES ARE SHOWN IN SCHEMATIC FASHION. THEIR LOCATIONS ARE NOT PRECISE OR NECESSARILY ACCURATE. LOCATE THE ABOVE SERVICES. CONSULT WITH THE PROPER AUTHORITIES CONCERNED WITH THE SUBJECT SERVICE LOCATION FOR INFORMATION REGARDING SUCH. CALL DIG-SAFE: 1-888-DIG-SAFE (1-888-344-7233)



- GENERAL NOTES:**
- OWNER OF RECORD.
60 MAIN STREET, LLC
50 MAIN STREET, SUITE 0
DURHAM, NEW HAMPSHIRE 03824
S.C.R.D. BOOK 4459, PAGE 587
 - LOT AREA: .33 ACRES (14,219 S.F.)
EXISTING = 94,226 (13,401 S.F.)
PROPOSED = 94,224 (13,401 S.F.)
 - BEFOREHAND EXAMS.
 - A. EXISTING FEATURES PLAN 60 MAIN ST. & JENKINS CT. DURHAM STRAFFORD COUNTY, NH PREPARED FOR 60 MAIN STREET, LLC. PREPARED BY NORWAY PLANS ASSOCIATES, INC. DATED SEPTEMBER, 2017.
 - VERTICAL DATUM IS ASSUMED.
 - ALL OUTSIDE CONSTRUCTION ACTIVITY RELATED TO THE DEVELOPMENT OF THIS SITE IS RESTRICTED TO THE HOURS OF 7:30 A.M. TO 6:00 P.M. MONDAY THROUGH FRIDAY AND 8:00 A.M. TO 5:00 P.M. SATURDAY.
 - FOR MORE INFORMATION ABOUT THIS SITE PLAN, OR TO SEE THE COMPLETE PLAN SET, CONTACT THE TOWN OF DURHAM PLANNING DEPARTMENT, 8 NEWMARKET ROAD, DURHAM, NH 03824. (603) 868-8064.
 - ALL EXTERIOR LIGHTING MUST BE FULLY SHIELDED AND NOT PROJECT GLARE TOWARD ANY ADJUTING PROPERTIES.
 - ACCESS INTO THE SITE FOR FIRE APPARATUS SHALL BE MAINTAINED AT ALL TIMES DURING THE CONSTRUCTION PERIOD.
 - UNDERGROUND UTILITIES SHOWN HEREON ARE BASED ON OBSERVABLE PHYSICAL EVIDENCE. NO WORK SHALL BE DONE UNLESS THE CONTRACTOR HAS BEEN ADVISED BY THE TOWN ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION AND DEPTH OF ALL UTILITIES. CONSULT WITH THE PROPER AUTHORITIES CONCERNED WITH THE SUBJECT SERVICE LOCATIONS FOR INFORMATION REGARDING SUCH. CALL DIG-SAFE AT 1-888-DIG-SAFE.
 - IT IS THE APPLICANT'S, SITE CONTRACTOR'S, AND BUILDING CONTRACTOR'S RESPONSIBILITY TO FOLLOW ALL REQUIREMENTS NOTICED TO THIS SITE PLAN APPROVAL. PLEASE REVIEW THESE PLANS AND THE PLANNING BOARD NOTICE OF DECISION CAREFULLY. CONTACT THE DURHAM PLANNING DEPARTMENT AT (603) 868-8064 WITH ANY QUESTIONS OR CONCERNS.
 - THE PROPERTY IS NOT LOCATED IN THE FLOOD ZONE.

13 JENKINS COURT
TAX MAP: 5
LOT: 1
GALARO PROPERTIES LLC
263 CENTRAL AVENUE
DURHAM, NH 03824
SPOB: 3759/785

SITE DATA BLOCK
PLAN INTENT: THE PROPOSAL IS TO DEMOLISH PART OF THE EXISTING BUILDING AND CONSTRUCT A NEW ADDITION IN ROUGHLY THE SAME FOOTPRINT WITH A 536 SF EXPANSION TO ALLOW FOR KITCHEN AND OFFICE.
ZONE: CBD - CENTRAL BUSINESS DISTRICT
USE: COMMERCIAL-BASEMENT AND FIRST FLOOR
RESIDENTIAL-SECOND FLOOR (6 UNITS)

DIMENSIONAL REQUIREMENTS

REQUIREMENT	REQUIRED IN CB DISTRICT
MINIMUM LOT SIZE (SQUARE FEET)	5,000 SF
MINIMUM LOT FRONTAGE (FEET)	50
MINIMUM LOT SETBACKS (FEET)	NA
FRONT SETBACK (FEET)	NA
REAR SETBACK (FEET)	NA
MAXIMUM ROAD SETBACK (FEET)	NA
MAXIMUM HEIGHT W/ P.B. APPROVAL (FEET)	3 STORIES
IMPERVIOUS SURFACES RATIO	100%

PARKING REQUIREMENTS

AREA	SPACES REQUIRED
RESTAURANTS LESS THAN 536 SF BUILDING EXPANSION	1 SPACE/100 SF = 5 SPACES
4,000 SF	

- PER ZONING ORDINANCE, SECTION 175-112: CENTRAL BUSINESS DISTRICT SPECIAL CONDITIONS:**
- ALL NEW DEVELOPMENT MAY BE EXEMPT FROM THE PARKING REQUIREMENTS PROVIDED THAT ONE OF THE FOLLOWING CONDITIONS IS MET:
 - A ONE-TIME PARKING IMPACT FEE IS PAID BY THE OWNER AND/OR DEVELOPER.
 - THE EXISTING NUMBER OF REQUIRED PARKING SPACES IS NOT REDUCED BY ANY PROPOSED DEVELOPMENT UNLESS APPROVED BY THE PLANNING BOARD.
 - THE PLANNING BOARD WAIVES THE REQUIREMENT FOR THE CALCULATION OF REQUIRED PARKING SPACES BASED ON PARKING CALCULATION.

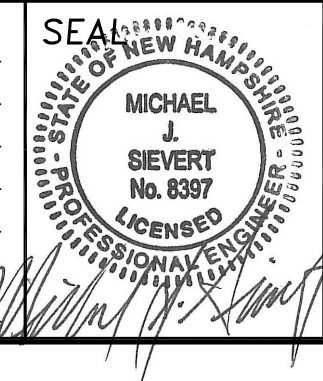
50-54 MAIN STREET
TAX MAP: 4
ARROW 5054 PROPERTIES LLC
14 DAVIS AVENUE
DURHAM, NH 03824
SPOB: 5252/571

2-10 JENKINS COURT
TAX MAP: 4
LOT: 8
6 JENKINS COURT LLC
DURHAM, NH 03824
SPOB: 3702/75

MJS ENGINEERING, P.C.
CIVIL • STRUCTURAL • ENVIRONMENTAL
5 RAILROAD ST., P.O. BOX 359
NEWBURY, NH 03857
PHONE: (603) 659-4979, FAX: (603) 659-4627
E-MAIL: MJS@MJS-ENGINEERING.COM

SITE, GRADING AND UTILITY PLAN
prepared for
DOUG CLARK
60 MAIN STREET
DURHAM, NH

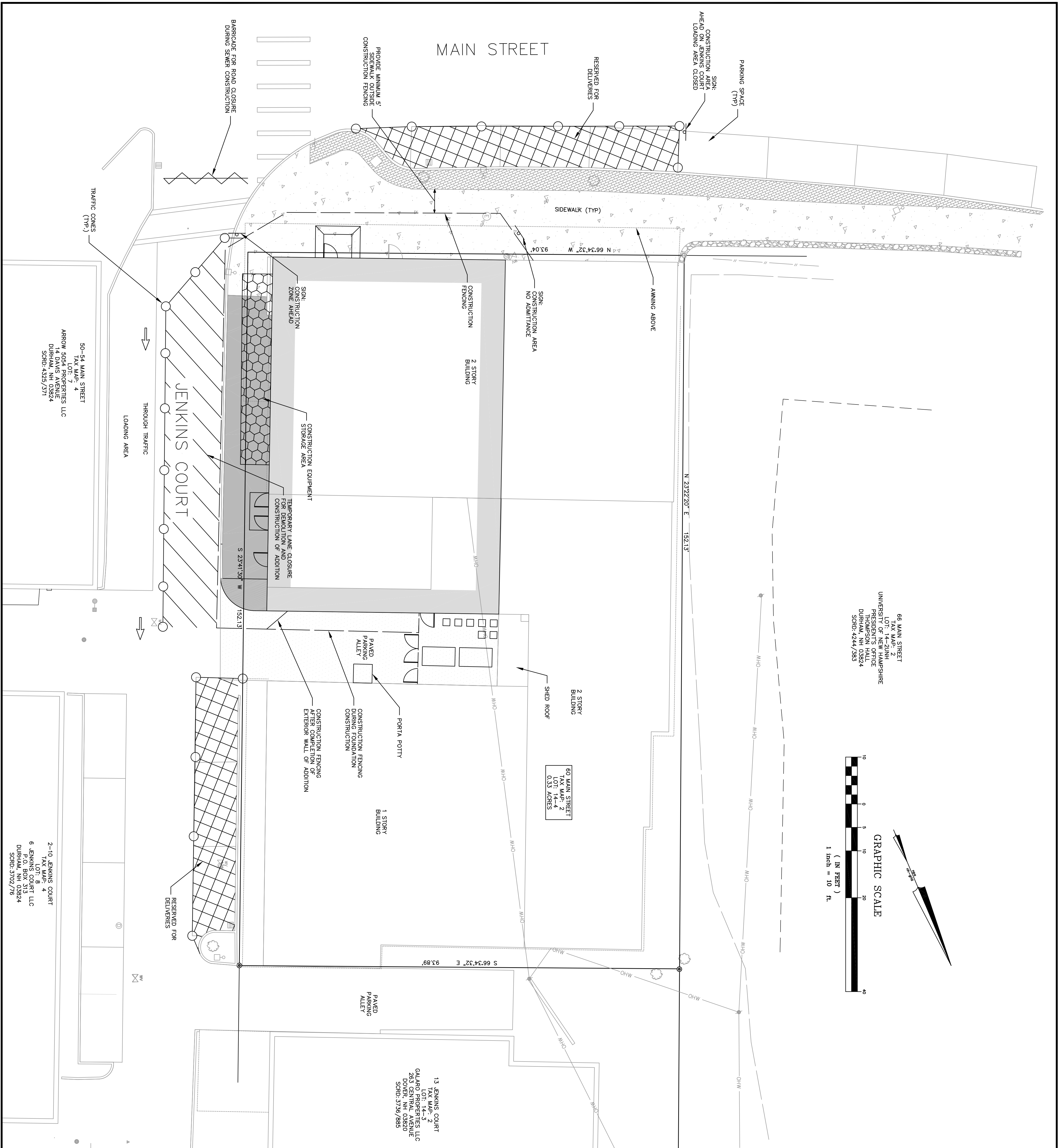
DATE: 5/16/18
SCALE: 1"=10'
DESIGNED BY: MJS
DRAWN BY: EHK
APPROVED BY: MJS
DWG FILE: 19-024 CivilB.dwg



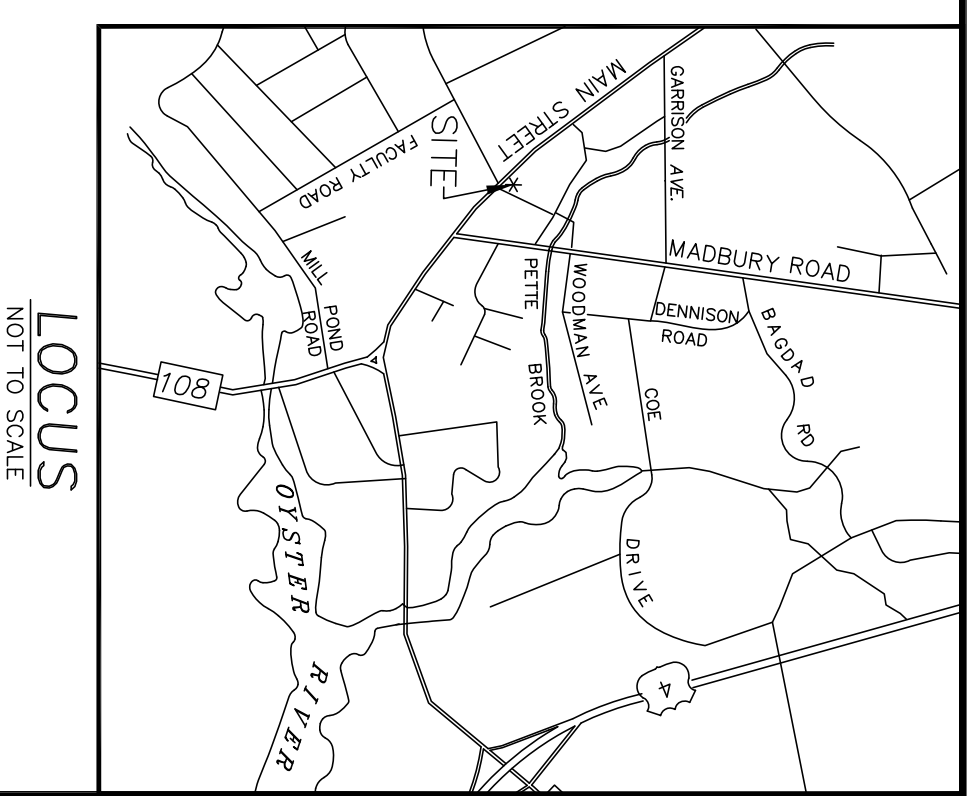
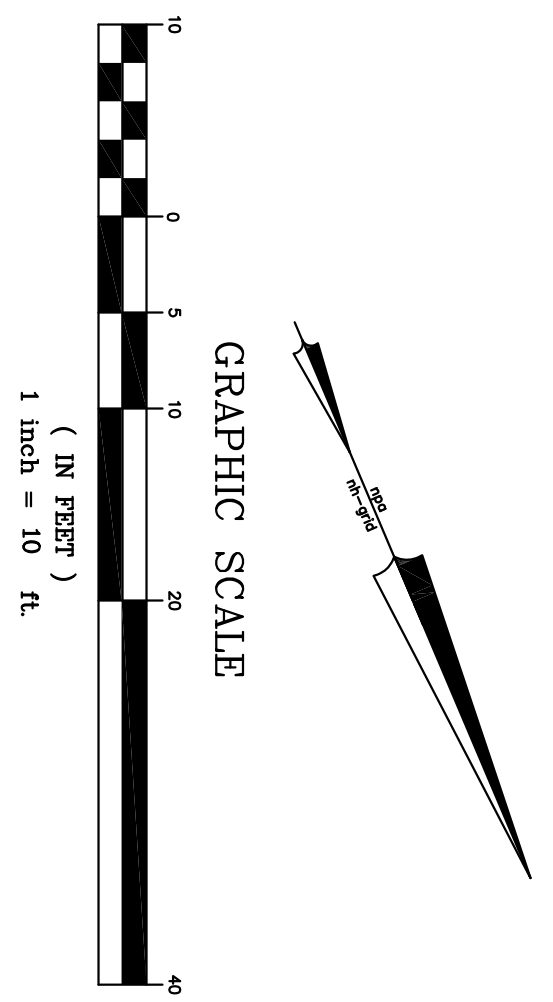
NO.	REVISIONS	DATE	INT.
0	INITIAL SUBMISSION TO DURHAM PLANNING BOARD	5/16/19	EHK

C2

JOB: 19-024



66 MAIN STREET
 TAX MAP: 2
 LOT: 14-20/1N
 UNIVERSAL PRESIDENT'S OFFICE
 THOMPSON HALL
 DURHAM, NH 03824
 SCRD: 424/353



- CONSTRUCTION STAGING NOTES:**
1. CONSTRUCTION TO BEGIN IN SPRING OF 2019 UPON RECEIPT OF APPROVALS.
 2. CONSTRUCTION HOURS SHALL BE MONDAY THROUGH FRIDAY 7:00AM TO 6:00PM SATURDAY 8:00AM TO 3:00PM.
 3. CONSTRUCTION DELIVERIES SHALL BE MADE BETWEEN WORKING HOURS AND IN THE DELIVERY AREA ONLY.
 4. NO CONSTRUCTION DEBRIS OR SOIL MATERIALS SHALL BE STORED ON SITE OR TOWN PROPERTY OVERNIGHT.
 5. CONSTRUCTION SIGNAGE SHALL BE USED TO INFORM THE PUBLIC OF SIDEWALK LANE CLOSURES AND/OR ROAD CLOSURES AS REQUIRED.
 6. JENKINS CT WILL REQUIRE FULL CLOSURE FOR SEWER CONSTRUCTION. THE INSTALLATION OF A NEW WATER SERVICE AND GAS SERVICE WILL REQUIRE A TEMPORARY CLOSURE COORDINATE WITH DURHAM DPW PRIOR TO CLOSURE. IS REQUIRED AND POLICE DETAIL MAY BE REQUIRED.
 7. THE TEMPORARY LANE CLOSURE ON JENKINS CT WILL BE REQUIRED FOR BUILDING DEMOLITION AND NEW ADDITION CONSTRUCTION. ADDITIONAL LANE CLOSURES MAY BE REQUIRED.
 8. ALL PUBLIC STREETS AND SIDEWAYS SHALL BE CLEANED AT THE END OF EACH DAY.
 9. THE CONSTRUCTION FENCING SHALL BE IN PLACE AROUND THE CORNER OF THE SITE AT ALL TIMES DURING CONSTRUCTION AND SHALL BE SECURED AFTER HOURS.
 10. DUST SHALL BE CONTROLLED ON SITE BY USE OF DUST CONTROL MEASURES SUCH AS WATERING.
 11. EROSION SHALL BE CONTROLLED BY USING SILT SOCKS AT THE PERIMETER OF THE CONSTRUCTION AREA AND SILT SOCKS SHALL BE INSTALLED IN CATCH BASINS ON JENKINS CT.
 12. ANY DEWATERING AT THE SITE WILL BE PUMPED INTO A TANK AND HAULED AWAY.
 13. CONCRETE WASHOUT SHALL NOT BE ALLOWED ON SITE.

50-54 MAIN STREET
 TAX MAP: 4
 ARROW SQUARE LOT DEVELOPMENTS LLC
 14 DAVIS AVENUE
 DURHAM, NH 03824
 SCRD: 4325/371

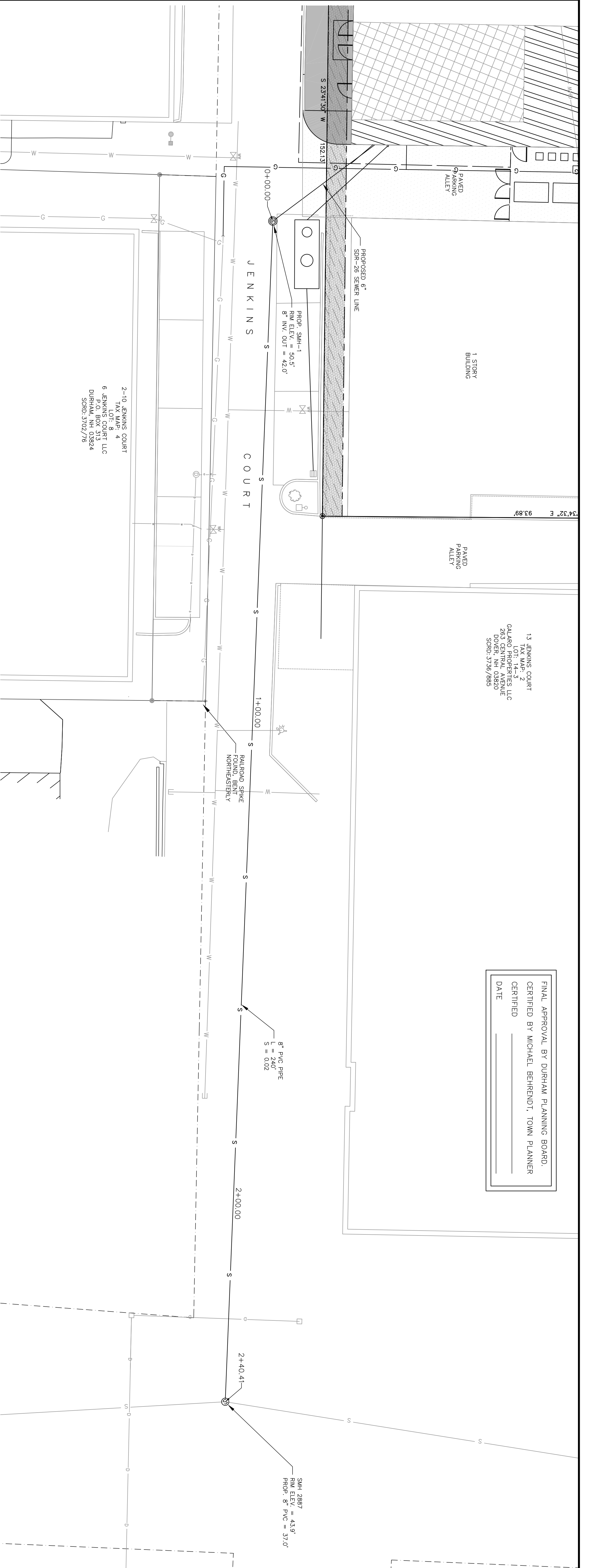
2-10 JENKINS COURT
 TAX MAP: 4
 6 JENKINS COURT LLC
 P.O. BOX 313
 DURHAM, NH 03824
 SCRD: 3702/78

13 JENKINS COURT
 TAX MAP: 2
 GALARDO PROPERTIES LLC
 283 CENTRAL AVENUE
 DOWEN, NH 03820
 SCRD: 3789/959

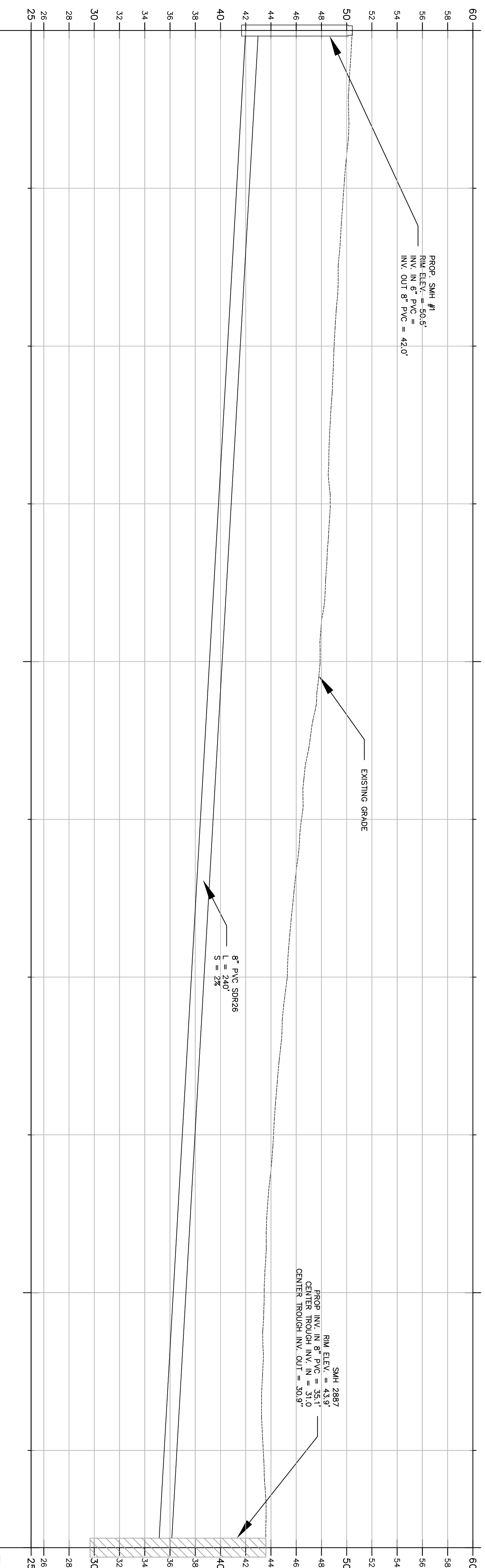
FINAL APPROVAL BY DURHAM PLANNING BOARD.
 CERTIFIED BY MICHAEL BEHRENDT, TOWN PLANNER
 DATE _____

<p>MJS ENGINEERING, P.C. CIVIL • STRUCTURAL • ENVIRONMENTAL 5 RAILROAD ST., P.O. BOX 359 NEWHAMPTON, NH 03857 PHONE: (603) 659-4979, FAX: (603) 659-4627 E-MAIL: MJS@MJS-ENGINEERING.COM</p>	<p>CONSTRUCTION STATIONING PLAN prepared for DOUG CLARK 60 MAIN STREET DURHAM, NH</p>		DATE: 5/16/18 SCALE: 1"=10' DESIGNED BY: MJS DRAWN BY: EHK APPROVED BY: MJS DWG FILE: 19-024 CivilB.dwg		INITIAL SUBMISSION TO DURHAM PLANNING BOARD	5/16/19	EHK
					NO. _____	REVISIONS	DATE

JOB: 19-024
 C3



NOTES:
 1. THIS SHEET USES NAVD83 FOR THE SANITARY SEWER SYSTEM. ALL OTHER SHEETS USE AN ASSUMED VERTICAL DATUM THAT MUST BE TIED TO NAVD83.



FINAL APPROVAL BY DURHAM PLANNING BOARD.
 CERTIFIED BY MICHAEL BEHRENDT, TOWN PLANNER
 CERTIFIED _____
 DATE _____

 MJS ENGINEERING, P.C. CIVIL • STRUCTURAL • ENVIRONMENTAL 5 RAILROAD ST., P.O. BOX 3559 NEWHAMPTON, NH 03857 PHONE: (603) 659-4979, FAX: (603) 659-4627 E-MAIL: MJS@MJS-ENGINEERING.COM	SANITARY SEWER PLAN prepared for DOUG CLARK 60 MAIN STREET DURHAM, NH		DATE: 5/16/19 SCALE: 1"=10' DESIGNED BY: MJS DRAWN BY: MCS APPROVED BY: MJS DWG FILE: 19-024 CIVILB-.dwg		INITIAL SUBMISSION TO DURHAM PLANNING BOARD 5/16/19 MCS
					NO. _____ REVISIONS _____ DATE _____ INT. _____

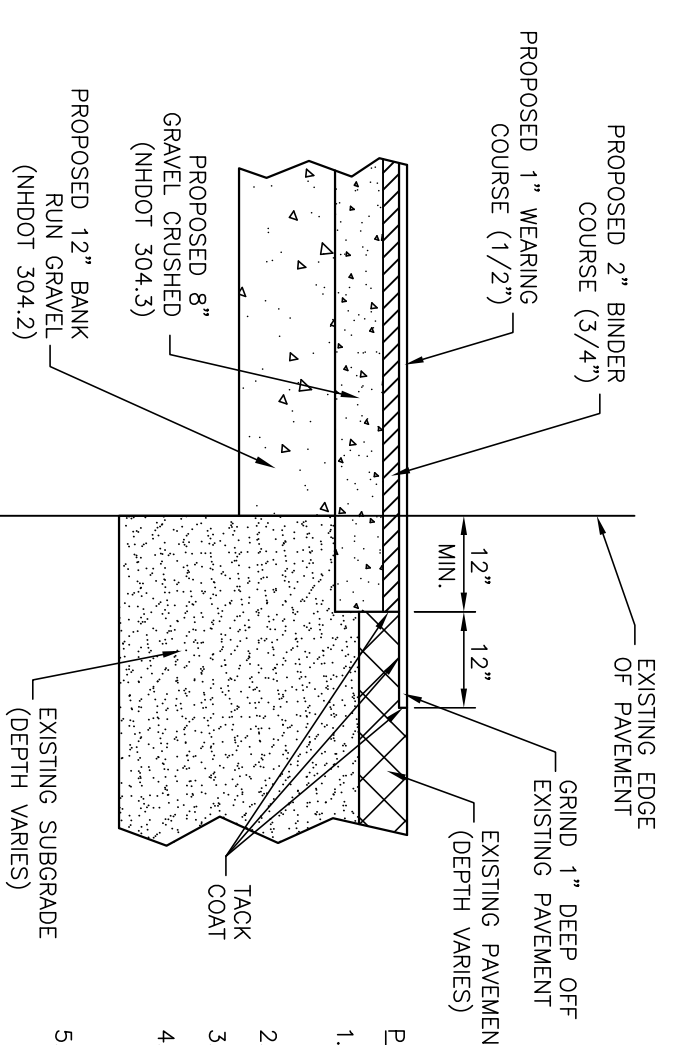
JOB: 19-024
 C4

CONSTRUCTION SEQUENCES

- THE ESTIMATED START OF CONSTRUCTION IS JUNE 2019 AND THE ESTIMATED END OF CONSTRUCTION IS FALL 2019. THE FOLLOWING CONSTRUCTION SEQUENCES SHALL BE FOLLOWED:
1. COMPLETE PRE-CONSTRUCTION MEETING WITH ALL PARTIES AS REQUIRED BY CONDITIONS OF APPROVAL.
 2. CONTACT LOCAL AGENCIES WITHIN 30 DAYS OF APPROVAL TO GET ALL NECESSARY DISCONNECTS PRIOR TO START OF CONSTRUCTION. PREPARE AND OBTAIN ALL NECESSARY PERMITS AS NECESSARY AND IN ACCORDANCE WITH TOWN REQUIREMENTS.
 3. DEMOLITION AND REMEDIATION CONSTRUCTION AND HAVE BUILDING CARRIED FROM ENVIRONMENTAL CONCERNS PRIOR TO INSTALL TEMPORARY CONSTRUCTION SAFETY FENCE (CHAIN LINK) IN ACCORDANCE WITH PLANS, DPW AND ABBUTERS.
 4. COORDINATE TEMPORARY ROAD CLOSURE WITH DURHAM DPW AND POLICE DEPARTMENT FOR DEMOLITION OF EXISTING CONCRETE DRIVEWAY.
 5. REMOVE EXISTING BUILDING ADDITION AS SHOWN AND EXCAVATE FOR NEW FOUNDATION.
 6. AS REQUIRED PRIOR TO BACKFILLING.
 7. REMOVE EXISTING EROSION CONTROL INCLUDING SILT SOCKS PRIOR TO CONSTRUCTION.
 8. COMPLETE ALL INSPECTIONS AND TESTING.
 9. SAWCUT PAVEMENT, PERFORM CUTS AND FILLS AS NECESSARY.
 10. INSTALL DRAINAGE AND CONNECT TO BUILDING ROOF DRAIN SYSTEM.
 11. INSTALL GRANULES TO BRING ROAD AND SIDEWALKS TO GRADE. COMPACT ALL FILL AND SELECT MATERIALS PRIOR TO PAVING. PAVEMENT EDGES AS SHOWN IN THE DETAILS AND RE-PAVE ALL DISTURBED AREAS.
 12. INSPECT, MAINTAIN, AND IF NECESSARY, REPAIR ALL EROSION AND SEDIMENT CONTROL MEASURES.
 13. REMOVE ALL TEMPORARY EROSION CONTROL MEASURES AFTER SITE IS STABILIZED AND RESEED ANY AREAS DISTURBED BY REMOVAL.

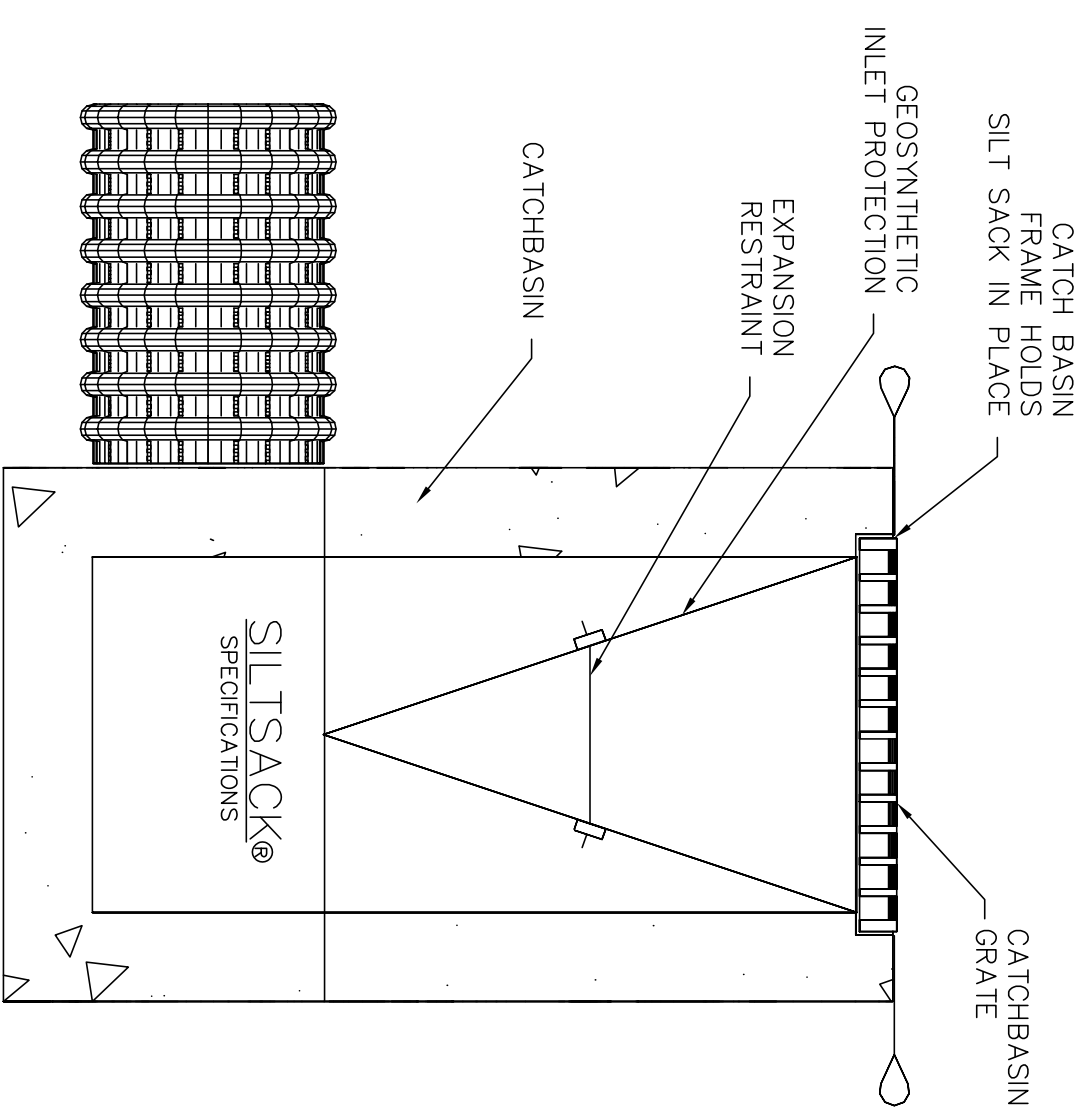
ADDITIONAL NOTES:

1. NO FILTER SHALL BE STORED ON SITE DURING CONSTRUCTION.
2. DURING CONSTRUCTION DUST SHALL BE PREVENTED FROM BECOMING A SAFETY OR HEALTH HAZARD BY THE APPLICATION OF ACCEPTED CONTROL METHODS SUCH AS WATERING.
3. IMPROPER CONSTRUCTION METHODS THAT ARE SHOWN ON THESE PLANS SHALL BE REMOVED BY THE CONTRACTOR.
4. DO NOT BEGIN CONSTRUCTION UNTIL ALL LOCAL, STATE, AND FEDERAL PERMITS HAVE BEEN APPLIED FOR AND RECEIVED.



- PAVEMENT SAWCUT NOTES**
1. SAWCUT THROUGH DEPTH OF PAVEMENT AT LEAST 1 FT.
 2. INSTALL AND COMPACT CRUSHED GRAVEL TO GRADE.
 3. PLACE BINDER COURSE.
 4. GRIND OR SAWCUT EXISTING PAVEMENT 1 FT. WIDE TO A DEPTH NECESSARY TO PROPERLY MATCH NEW WEARING COURSE PAVEMENT.
 5. TACK COAT ALL EXISTING PAVEMENT SURFACES WITH EMULSIFIED ASPHALT (MS-1) PRIOR TO PLACING NEW PAVEMENT.

TYPICAL PAVEMENT SAWCUT DETAIL
SCALE: N.T.S.



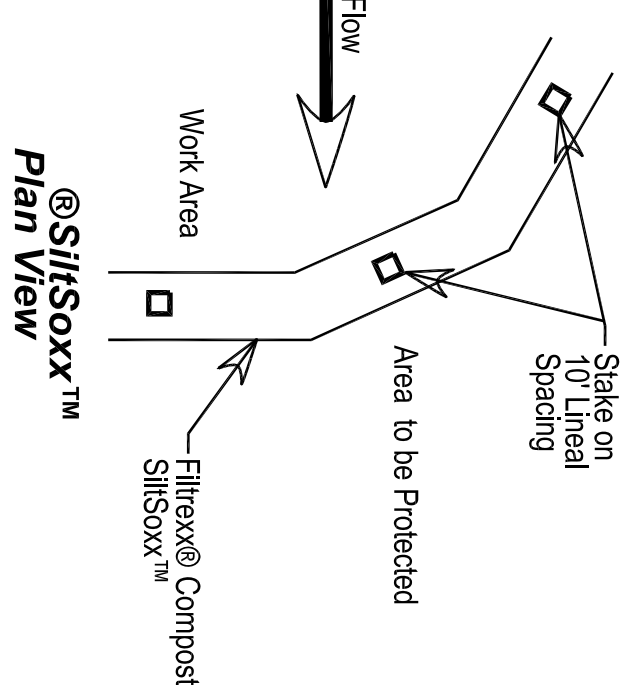
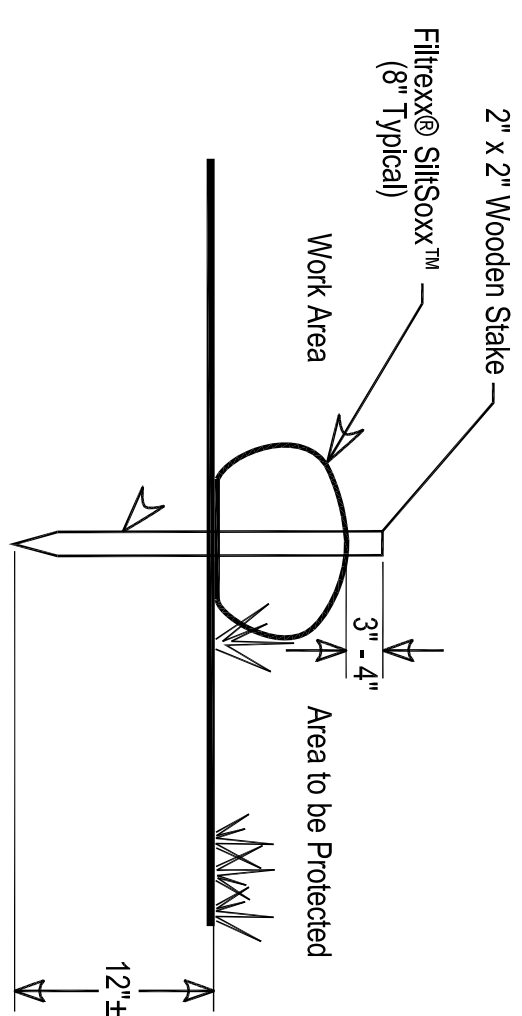
REGULAR FLOW SILT SACK
(FOR AREAS OF LOW TO MODERATE PRECIPITATION AND RUN-OFF)

PROPERTIES	TEST METHOD	UNITS
GRAB TENSILE STRENGTH	ASTM D-4632	300 LBS
GRAB TENSILE ELONGATION	ASTM D-4632	20 %
MULLEN BURST	ASTM D-3786	800 PSF
TRAPEZOID TEAR	ASTM D-4533	120 LBS
APPROXIMATE OPENING SIZE	ASTM D-4491	80 TO 100 MIC
PERMEABILITY	ASTM D-4491	0.55 SEC -1

NOTES:

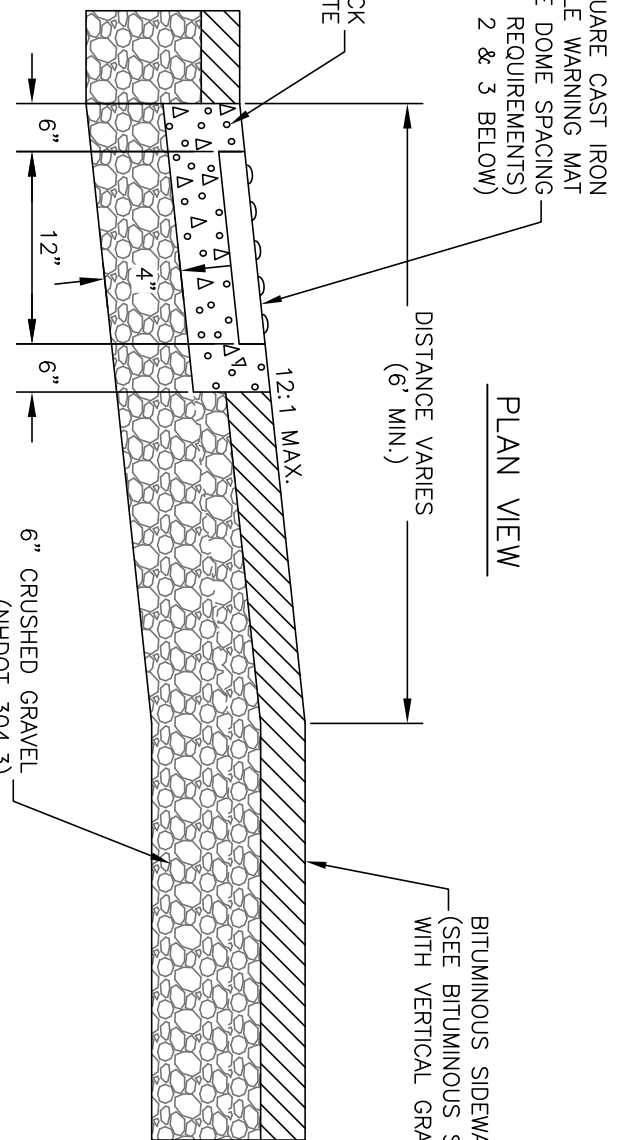
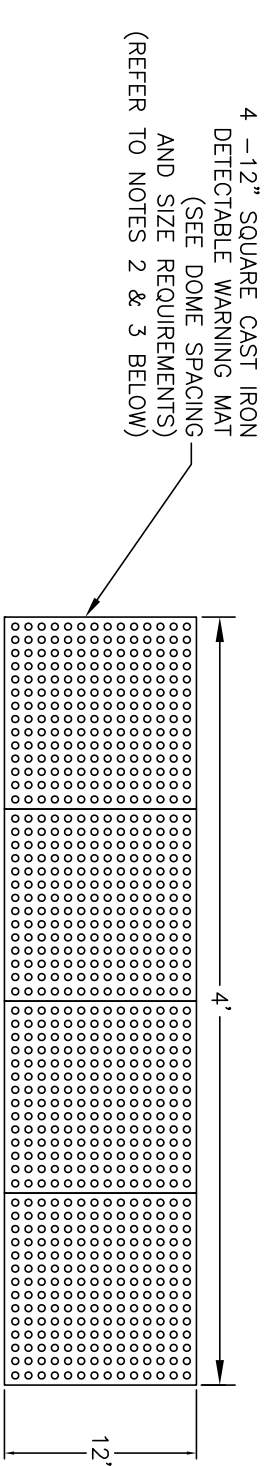
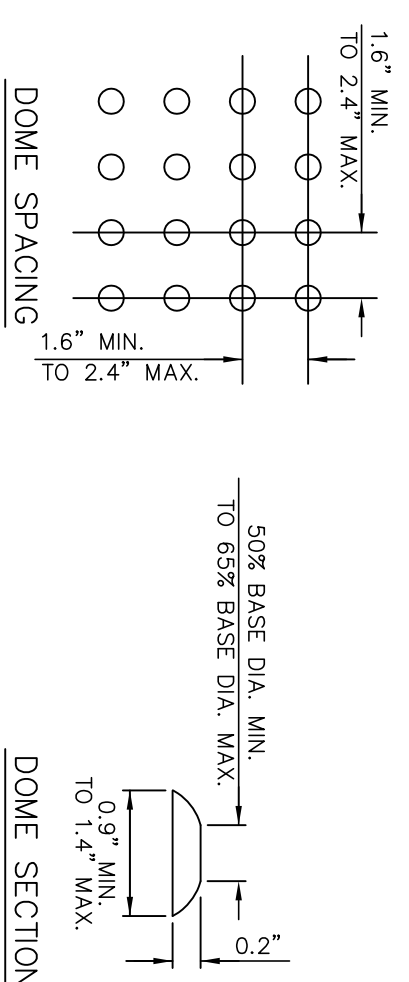
1. GEOSYNTHETIC SEDIMENT FILTER TRAP SHALL BE REGULAR FLOW TYPE.
2. FILTER TRAP SHALL BE INSPECTED AFTER EVERY RAIN EVENT OF 0.5\"/>

CATCH BASIN GEOSYNTHETIC SEDIMENT TRAP
N.T.S.



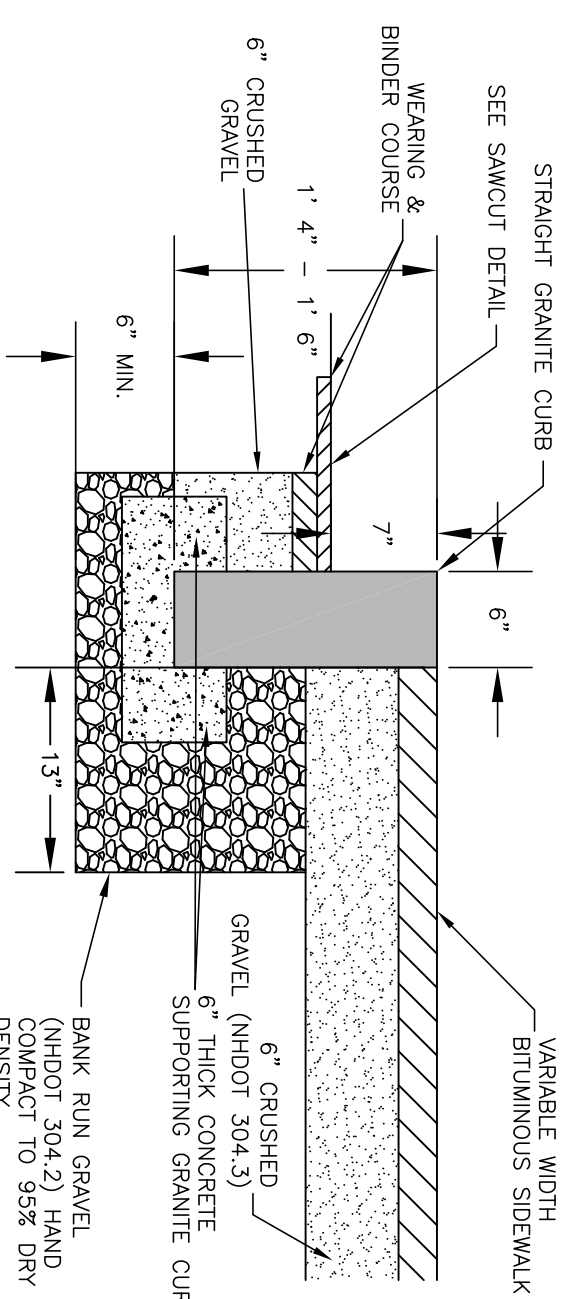
SILT SOCK DETAIL
N.T.S.

- Notes:**
1. All material to meet Filtersock® specifications.
 2. Compost material to be dispersed on site up slope from protected area.

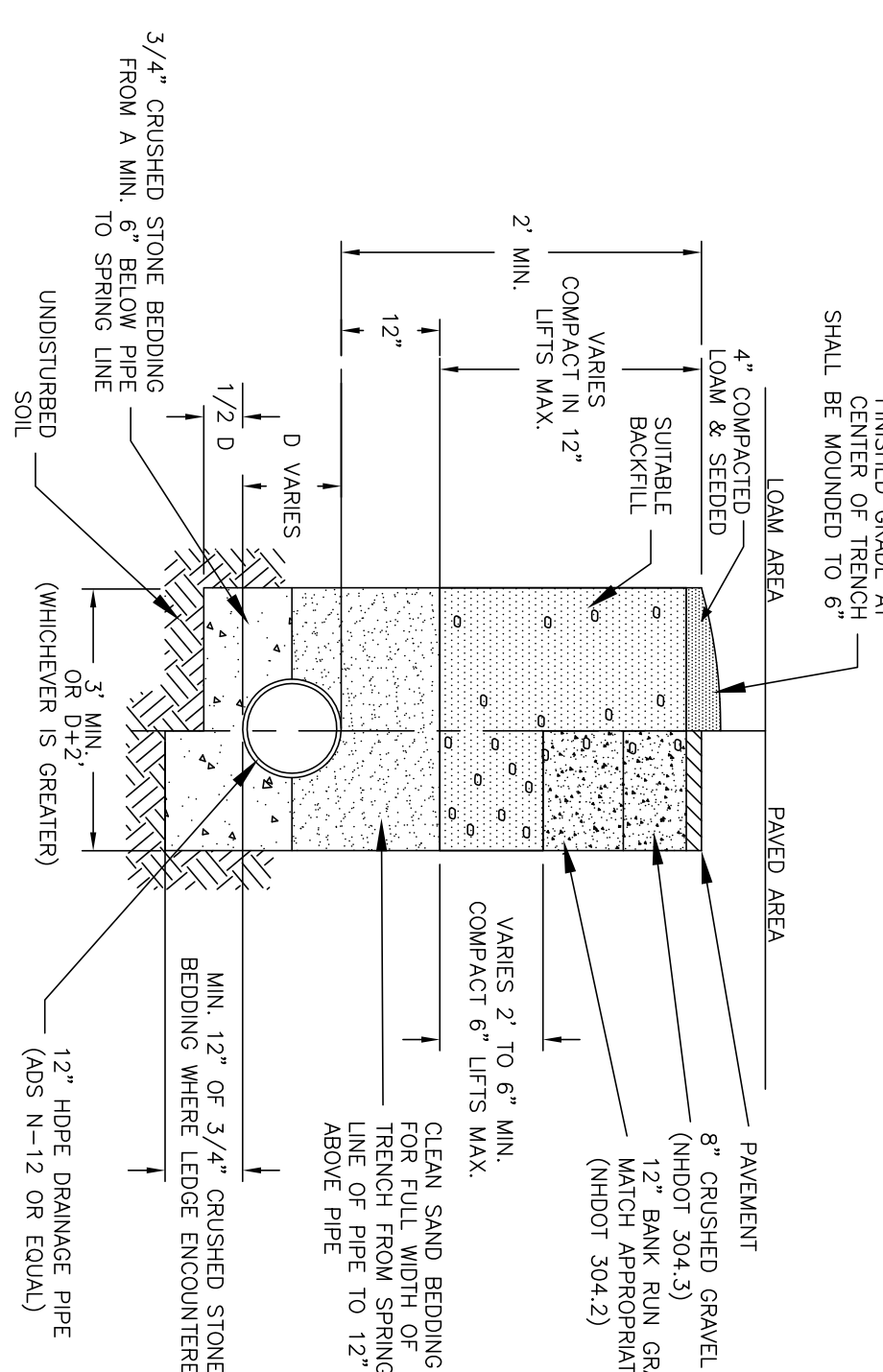


DETECTABLE WARNING MAT DETAIL
N.T.S.

- NOTES:**
1. MINIMUM CROSS SLOPE OF SIDEWALK TO BE 2%.
 2. CONCRETE TO BE 4,000 PSF.
 3. REFER TO MANUFACTURER'S SPECIFICATIONS FOR INSTALLATION OF DETECTABLE WARNING MATS.



TYPICAL BITUMINOUS SIDEWALK SECTION WITH VERTICAL GRANITE CURB
N.T.S.



STANDARD DRAINAGE PIPE TRENCH
N.T.S.

FINAL APPROVAL BY DURHAM PLANNING BOARD.	
CERTIFIED BY MICHAEL BEHRENDT, TOWN PLANNER	
CHECKED BY _____	
DATE _____	

NO.	REVISIONS	DATE	INT.
0	INITIAL SUBMISSION TO DURHAM PLANNING BOARD	5/16/19	MCS

DATE: 5/26/19
SCALE: AS SHOWN
DESIGNED BY: MJS
DRAWN BY: MCS
APPROVED BY: MJS
DWG FILE: 19-024 Detaila EVAN.dwg

CONSTRUCTION DETAILS
prepared for
DOUG CLARK
60 MAIN STREET
DURHAM, NH

MJS ENGINEERING, P.C.
CIVIL • STRUCTURAL • ENVIRONMENTAL
5 RAILROAD ST., P.O. BOX 3559
NEWBURY, NH 03857
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E-MAIL: MJS@MJS-ENGINEERING.COM

MANHOLE: GENERAL CONSTRUCTION REQUIREMENTS
(PER ENV-WQ 704.12 NUMERATION)

- A. ALL COMPONENT PARTS OF MANHOLE STRUCTURES SHALL HAVE THE STRENGTH, LEAK RESISTANCE, AND SPACE NECESSARY FOR THE INTENDED SERVICE.
- B. MANHOLE STRUCTURES SHALL BE DESIGNED TO WITHSTAND HS-20 LOADING AND SHALL NOT LEAK IN EXCESS OF ONE GPM PER VERTICAL FOOT OF MANHOLE FOR THE LIFE OF THE STRUCTURE.
- C. PRECAST REINFORCED CONCRETE AND CONCRETE GRADE RINGS SHALL BE CONSTRUCTED OF BASE SECTIONS SHALL BE OF MONOLITHIC CONSTRUCTION TO A POINT AT LEAST 6 INCHES ABOVE THE TOP SURFACE OF THE PRECAST CONCRETE GRADE RINGS.
- D. HORIZONTAL JOINTS BETWEEN SECTIONS OF PRECAST CONCRETE BARRELS SHALL BE OF AN OVERLAPPING TYPE, SEALED FOR WATER-TIGHTNESS USING A DOUBLE ROW OF AN ELASTOMERIC MATERIAL CONFORMING TO ASTM D2312-96(01/2003) AND SHALL BE PUSH-ON, BELL AND SPOUT TYPE.
- E. PRECAST CONCRETE GRADE RINGS SHALL BE CONSTRUCTED AS FOLLOWS:
(1) ELASTOMERIC RUBBER SLEEVE WITH WATER-TIGHT JOINTS AT THE MANHOLE OPENING AND PIPE SURFACES.
(2) CAST INTO THE WALL OR GEORGED WITH STAINLESS STEEL CLAMPS.
(3) ELASTOMERIC RUBBER SLEEVE WITH STAINLESS STEEL CLAMPS.
(4) NON-SHINK GROUTED JOINTS WHERE WATER-TIGHT BONDING TO THE MANHOLE AND MANHOLE RINGS SECTIONS SHALL BE ECCENTRIC IN SHAPE.
(5) ALL PRECAST SECTIONS AND BASES SHALL HAVE THE DATE OF MANUFACTURE AND THE NAME OR TRADEMARK OF THE MANUFACTURER IMPRESSED OR INDUBLY MARKED ON THE EXTERIOR SURFACES OF THE MANHOLE AND BASES.
(6) ALL PRECAST SECTIONS AND BASES SHALL BE COATED ON THE EXTERIOR WITH A BITUMINOUS DAMP-PROOFING COATING.
(7) ALL PRECAST SECTIONS AND BASES SHALL HAVE A BRICK BATED CHANGES IN DIRECTION, THE INVERTS SHALL BE LAID OUT IN CIRCLES OF PIPED ROW AT RADIUS POSSIBLE PARALLEL TO THE CENTER LINE OF THE SEWER PIPES. SHELVES SHALL BE CONSTRUCTED TO THE CENTER LINE OF THE SEWER PIPES. SHELVES SHALL BE TOWARD THE FLOWING THROUGH CHANNEL. UNDERLAYMENT OF INVERT AND SHELF SHALL CONSIST OF BRICK MASONRY, INVERTS AND SHELVES SHALL BE PLACED AFTER TESTING OF WHEN MANHOLE DEPTH IS LESS THAN 6 FEET, A REINFORCED CONCRETE SLAB COVER MAY BE USED IN LIEU OF A CONE SECTION, PROVIDED THE SLAB HAS AN ECCENTRIC ENTRANCE OPENING AND BE CAPABLE OF SUPPORTING HS-20 LOADS. 48 INCHES FOR SPACERS. LARGER THAN 24-INCH DIAMETER MANHOLE DIAMETERS SHALL BE INCREASED SO AS TO PROVIDE AT LEAST 12 INCHES OF SHELF ON EACH SIDE OF THE SEWER.
- F. PRECAST BASES SHALL BE PLACED ON A 6-INCH LAYER OF COMPACTED BEDDING MATERIAL THAT CONFORMS TO THE ASTM C33/C33M NO. 67 STONE STANDARD IN EFFECT AT THE TIME THE MANHOLE WAS MANUFACTURED. THE EXCAVATION SHALL BE DEMARLED WHILE PLACING BEDDING MATERIAL AND SETTING THE BASE OR POURING CONCRETE.

MANHOLE CONSTRUCTION MATERIAL REQUIREMENTS
(PER ENV-WQ 704.13 NUMERATION)

- A. MATERIALS OF CONSTRUCTION FOR MANHOLES SHALL BE AS FOLLOWS:
(1) CONCRETE FOR MANHOLES AND CONCRETE GRADE RINGS SHALL CONFORM TO THE TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
(2) REINFORCING FOR CONCRETE MANHOLES AND CONCRETE GRADE RINGS SHALL BE STEEL OR STRUCTURAL FIBERS THAT CONFORM TO THE NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
(3) PRECAST CONCRETE BARREL SECTIONS, CONES, AND BASES SHALL BE CERTIFIED BY THEIR MANUFACTURER(S) AS CONFORMING TO THE ASTM C478 STANDARD IN EFFECT AT THE TIME THE BARREL SECTIONS, CONES, AND BASES WERE MANUFACTURED.
(4) MANHOLE FRAME AND COVER SHALL PROVIDE A 3-INCH CLEARANCE FROM THE TOP SURFACE OF THE COVER TO THE TOP OF THE BRICK MASONRY. THE TOP SURFACE SHALL BE OF FRIED-GLAZED CAST IRON, SMOOTH, AND FREE FROM SCALES, LUMPS, BUSTERS, SAND HOLES, AND DEFECTS.
(5) CONTACT SURFACES OF COVERS AND FRAMES SHALL BE MACHINED AT THE FOUNDRY TO PREVENT RIPPING OF COVERS IN ANY ORIENTATION.
(6) COVERS SHALL BE CAST AND TESTED IN EFFECT AT THE TIME THE MANUFACTURER CASTING WERE MANUFACTURED.
(7) BRICK MASONRY FOR SHELF, INVERT, AND GRADE ADJUSTMENT SHALL BE CERTIFIED BY THE MANUFACTURER AS CONFORMING TO THE ASTM C90 STANDARD IN EFFECT AT THE TIME THE BRICK IS MANUFACTURED. THE BRICK SHALL BE OF GRADE SS AND SHALL BE MORE THAN 5 LAYERS OF BRICK FOR GRADE ADJUSTMENT.
(8) MATERIALS OF CONSTRUCTION FOR MANHOLE GRADE ADJUSTMENT SHALL BE AS FOLLOWS:
(a) CONCRETE SHALL BE TYPE II PORTLAND CEMENT AND SAND WITH OR WITHOUT HYDRATED LIME ADDITION.
(b) GRADE ADJUSTMENT SHALL BE TYPE II PORTLAND CEMENT AND SAND WITH OR WITHOUT HYDRATED LIME ADDITION.
(c) PORTLAND CEMENT SHALL BE TYPE II PORTLAND CEMENT AND SAND WITH OR WITHOUT HYDRATED LIME ADDITION.
(d) PROPORTIONS IN VOLUMES SHALL BE AS SHOWN IN TABLE 704-4.

HYDRATED LIME	SAND	TYPE II PORTLAND CEMENT
NONE	4.5 PARTS	1.5 PARTS
0.5 PART	4.5 PARTS	ONE PART

- (3) CEMENT SHALL BE TYPE II PORTLAND CEMENT THAT IS CERTIFIED BY ITS MANUFACTURER AS CONFORMING TO THE ASTM C150/C150M STANDARD IN EFFECT AT THE TIME THE MANHOLE WAS MANUFACTURED. THE HYDRATED LIME SHALL BE TYPE II PORTLAND CEMENT CONFORMING TO THE ASTM C207 STANDARD IN EFFECT AT THE TIME THE HYDRATED LIME WAS PROCESSED. CONCRETE OF INERT MATERIAL, SAND, THAT IS CERTIFIED BY ITS SUPPLIER AS CONFORMING TO THE ASTM C33/C33M NO. 67 STONE STANDARD IN EFFECT AT THE TIME THE SAND IS PROCESSED BY STANDARD SPECIFICATIONS FOR CONCRETE, FINE AGGREGATES, AND CONCRETE FOR DRAIN SUPPORTS SHALL CONFORM TO THE REQUIREMENT FOR CLASS SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

MANHOLE TESTING REQUIREMENTS. (ENV-WQ 704.17)

- (A) MANHOLES SHALL BE TESTED FOR LEAKAGE USING A VACUUM TEST.
- (B) THE MANHOLE VACUUM TEST SHALL CONFORM TO THE FOLLOWING:
(1) THE MINIMUM ACCEPTABLE TEST PRESSURE SHALL BE 10 INCHES HG. AND TO 9 INCHES HG SHALL BE TESTED FOR A MINIMUM OF 15 MINUTES.
(2) THE MANHOLE SHALL BE REPAIRED AND RE-TESTED BEFORE THE TEST HOLDS FAIL TO BE COMPLETED.
- (C) THE MANHOLE SHALL BE REPAIRED AND RE-TESTED BEFORE THE TEST HOLDS FAIL TO BE COMPLETED.
- (D) INVERTS AND SHELVES SHALL NOT BE INSTALLED UNTIL AFTER SUCCESSFUL TESTING IS COMPLETED.
- (E) IMMEDIATELY FOLLOWING COMPLETION OF THE LEAKAGE TEST, THE FRAME AND COVER SHALL BE INSTALLED AND THE MANHOLE SHALL BE OPENED TO THE STREET TO PREVENT ACCIDENTAL ENTRY BY UNAUTHORIZED PERSONS, CHILDREN, OR ANIMALS. UNTIL THE CONTRACTOR IS READY TO MAKE FINAL ADJUSTMENT TO GRADE.

FINAL APPROVAL BY DURHAM PLANNING BOARD.
CERTIFIED BY MICHAEL BEHRENDT, TOWN PLANNER
DATE _____

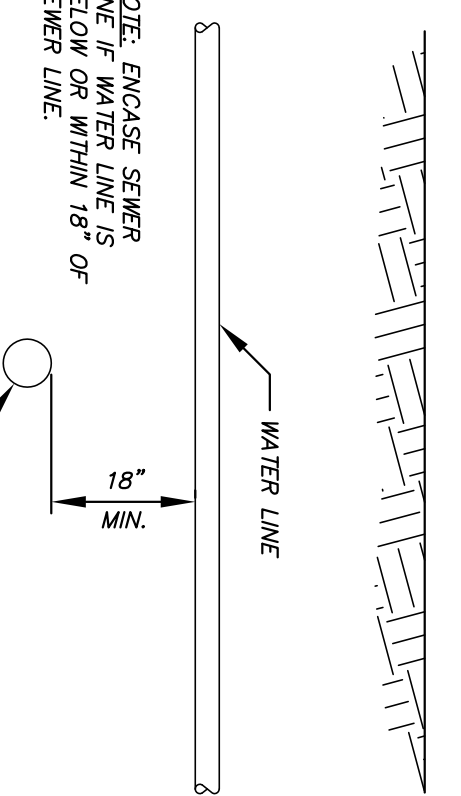
SEWER NOTES:
FOR THE REQUIREMENTS OF DESIGN AND CONSTRUCTION FOR SEWERAGE AND WASTEWATER TREATMENT FACILITIES.

- (A) GRAVITY SEWER CONSTRUCTION MATERIALS (ENV-WQ 704.05)
(1) PLASTIC GRAVITY SEWER PIPE AND FITTINGS SHALL BE 8 INCH PVC SDR 35 CONFORMING TO ASTM D3034. SEWER SERVICE SHALL BE 8" SDR 35 PVC AND SHALL BE 100% VIRGIN POLYETHYLENE TEREPHTHALATE (PET) WITH A TENSILE STRENGTH OF AT LEAST 46 PSI AT 5 PERCENT PIPE DIAMETER DEFLECTION, AS MEASURED IN ACCORDANCE WITH ASTM D2232-96(01/2003) AND SHALL BE ELASTOMERIC MATERIAL CONFORMING TO ASTM D2312-96(01/2003) AND SHALL BE PUSH-ON, BELL AND SPOUT TYPE.
- (B) GRAVITY SEWER PIPE TESTING REQUIREMENTS (ENV-WQ 704.06)
(1) ALL NEW SEWERS SHALL BE TESTED FOR WATER TIGHTNESS BY THE USE OF LOW-PRESSURE AIR TESTING.
(2) LOW-PRESSURE AIR TESTING SHALL BE IN CONFORMANCE WITH ASTM D2232-96(01/2003) AND SHALL BE CONDUCTED IN ACCORDANCE WITH THE WRITTEN INSTRUCTIONS FOR THE APPLICATION OF PLASTIC GRAVITY SEWER LINES USING LOW-PRESSURE AIR.
(3) ALL NEW 8" PVC PIPE ASSOCIATION UNI-B-6, "LOW-PRESSURE AIR TESTING OF INSTALLED SEWER PIPE" (1998).
(4) ALL NEW SEWERS SHALL BE TESTED USING A LAMP TEST AND BY INTRODUCING WATER TO DETERMINE THAT THERE IS NO STANDING WATER IN THE SEWER AND THAT THERE IS NO GRADE FOLLOWING INSTALLATION AND PRIOR TO USE.
(5) NOT LESS THAN 30 DAYS NOR MORE THAN 90 DAYS FOLLOWING INSTALLATION, THE MAXIMUM ALLOWABLE DEFLECTION OF FLEXIBLE SEWER PIPE SHALL BE 5% PERCENT OF AVERAGE INSIDE DIAMETER. A ROAD BALL OR MANHOLE WITH A BEING USED FOR TESTING PIPE DEFLECTION, THE DEFLECTION TEST SHALL BE CONDUCTED WITHOUT MECHANICAL PULLING DEVICES.

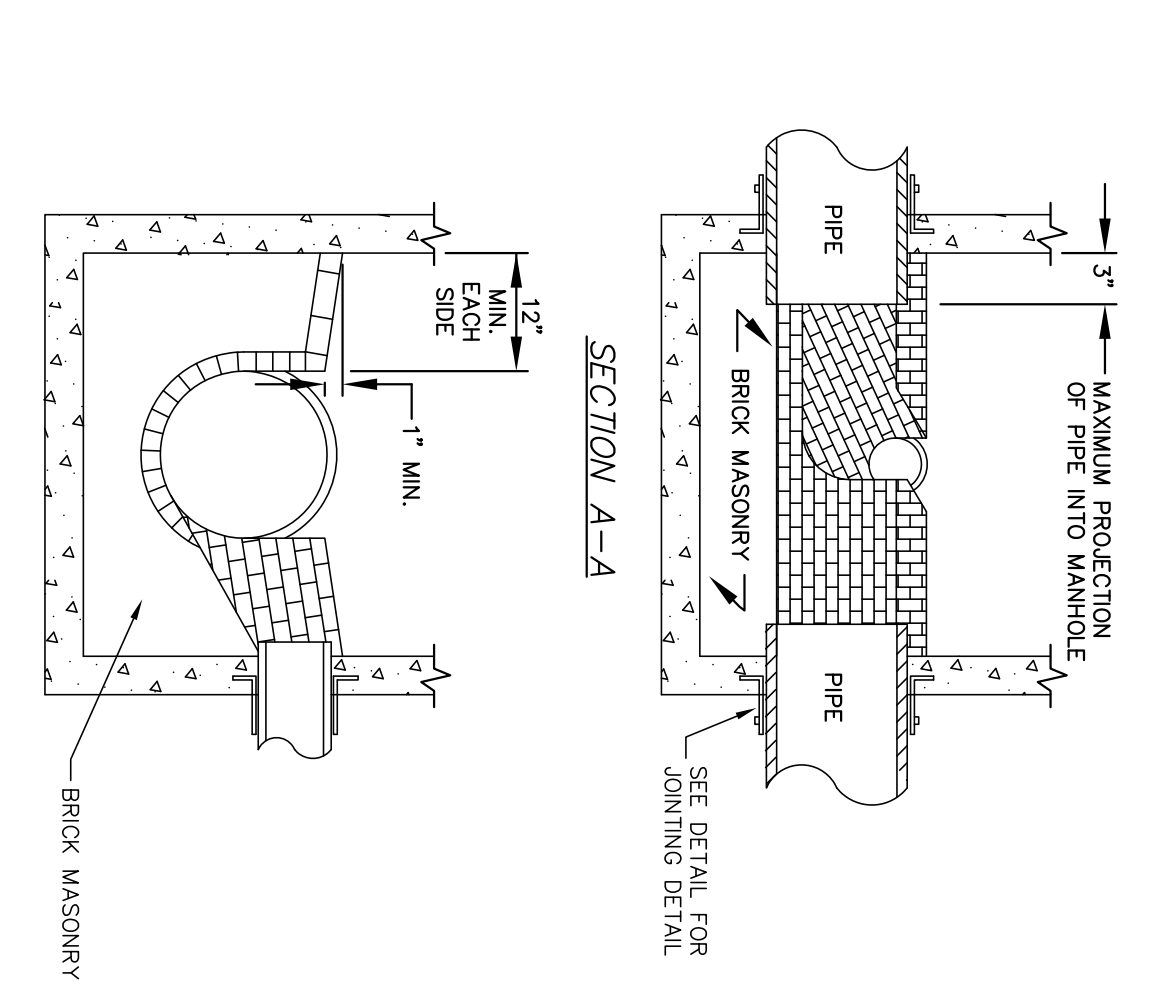
PROTECTION OF WATER SUPPLIES (ENV-WQ 704.19)

- (A) SEWERS SHALL BE LOCATED AT LEAST 10 FEET HORIZONTALLY FROM ANY WATER SUPPLY.
(B) SEWERS SHALL BE LOCATED AT LEAST 10 FEET HORIZONTALLY FROM ANY STRUCTURES, UTILITY CHAMBERS, AND BUILDING FOUNDATIONS, PROVIDED THAT CONSTRUCTION REQUIREMENTS SPECIFIED IN ENV-WQ 704.08.
(C) WHENEVER SEWERS MUST CROSS WATER MAINS, THE SEWER SHALL BE CONSTRUCTED AS FOLLOWS:
(1) THE SEWER AND WATER MAIN SHALL BE NOT LESS THAN 18 INCHES WITH WATER ABOVE SEWER, AND FROM THE WATER MAIN.
(2) SEWER PIPE JOINTS SHALL BE LOCATED AT LEAST 6 FEET HORIZONTALLY FROM THE WATER MAIN.

WATER/SEWER CROSSING
N.T.S.

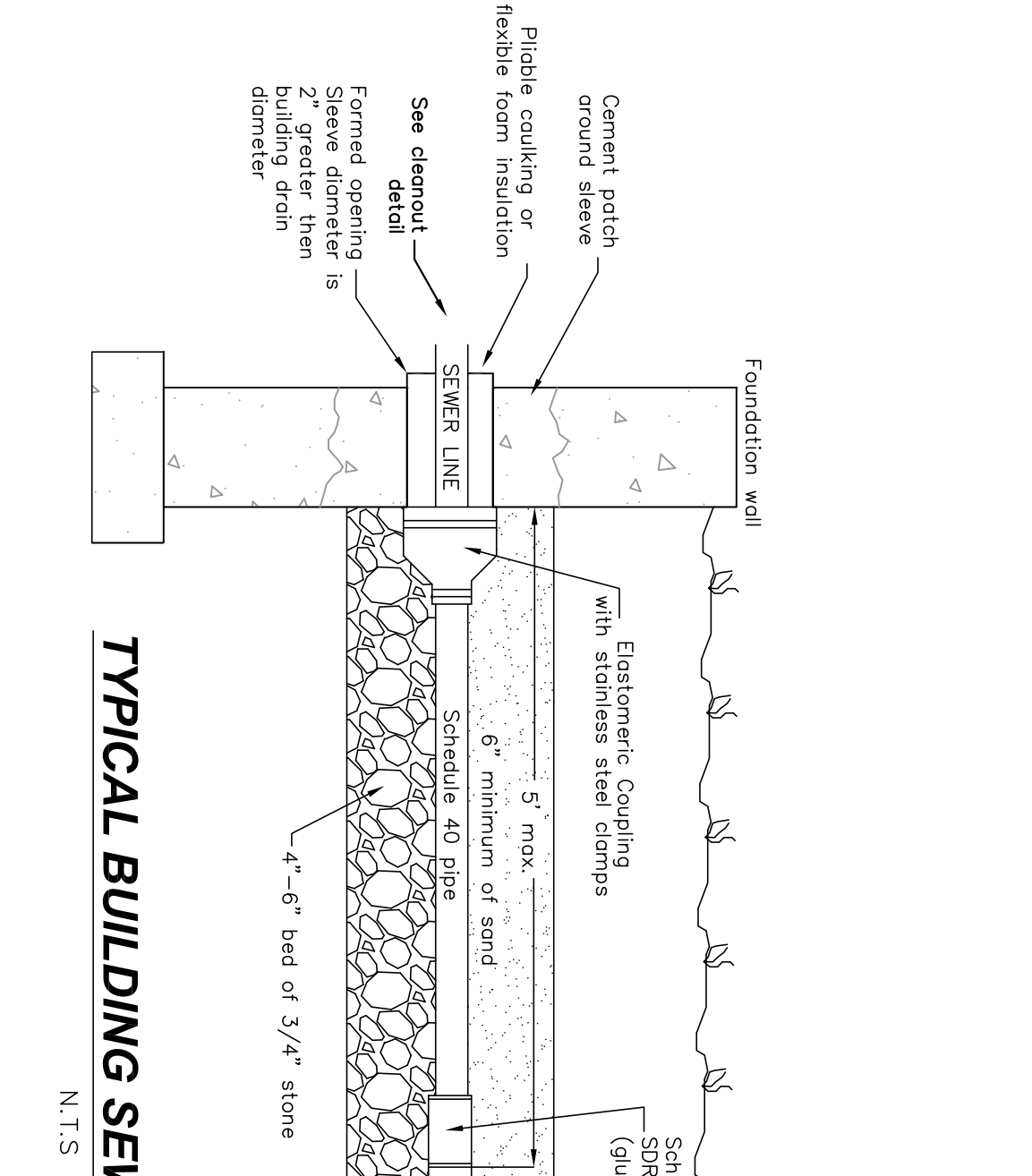


TYPICAL SEWER MANHOLE INVERT
N.T.S.



MANHOLE INVERT NOTE:
1. MANHOLE INVERT SHALL BE BRICK MASONRY.
2. INVERT INVERT BRICKS SHALL BE LAID ON EDGE.
3. INVERT AND SHELF TO BE PLACED AFTER LEAKAGE TEST.
4. CAST-IN-PLACE CONCRETE.

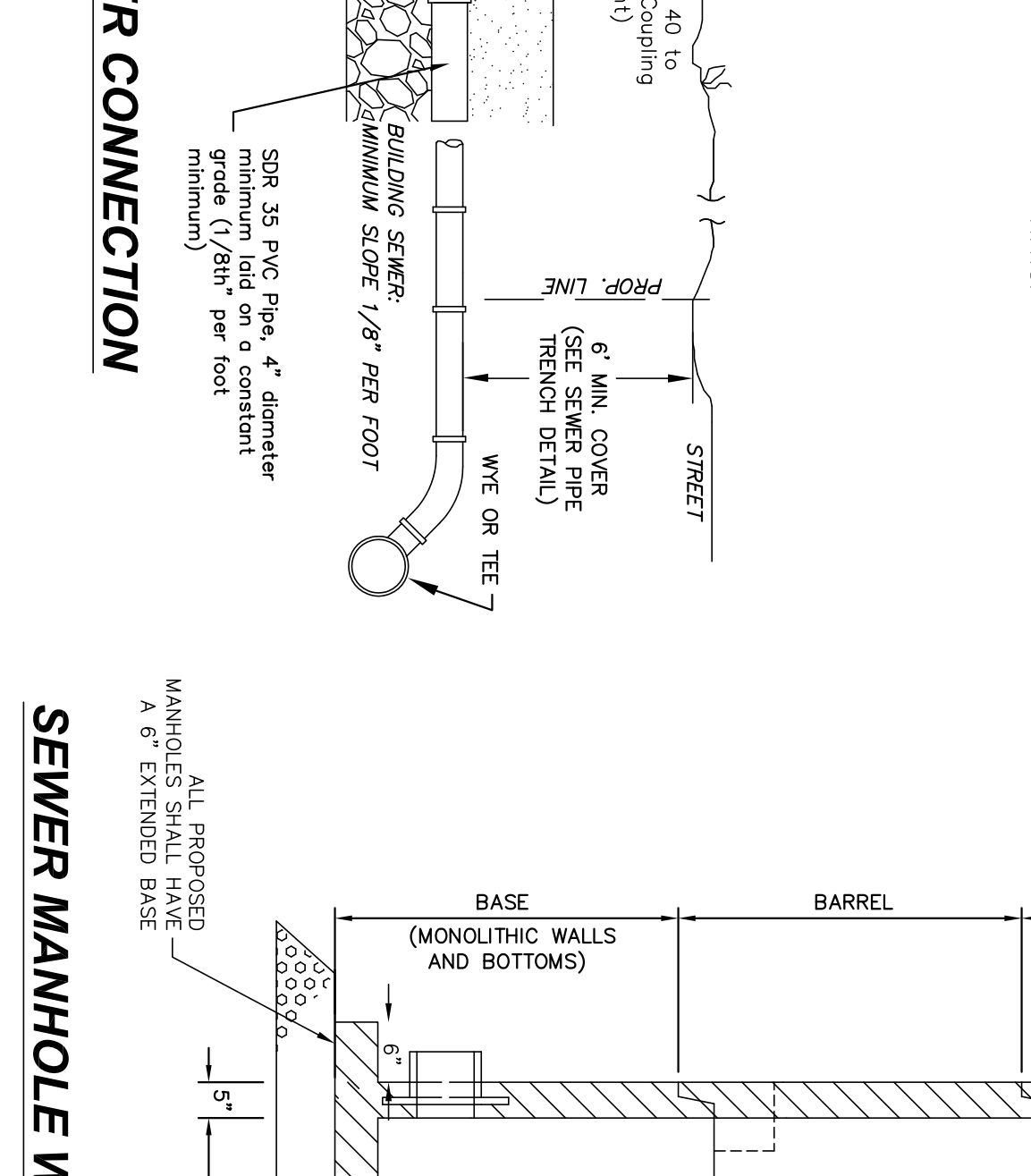
TYPICAL BUILDING SEWER CONNECTION
N.T.S.



SEWER TRENCH CHECK DAM DETAIL
N.T.S.

- 1. THERE SHALL BE NO STEPS IN THE THREE PROPOSED MANHOLES.
- 2. ALL PROPOSED MANHOLES SHALL HAVE A 6\"/>

SEWER MANHOLE WITH EXTENDED BASE DETAIL
N.T.S.



SEWER TRENCH CHECK DAM DETAIL
N.T.S.

- 1. RIPLEY'S DAM IS AVAILABLE FROM E.J. PRESCOTT.
- 2. INSTALL PER MANUFACTURER'S SPECIFICATIONS.

