



Spruhan Engineering, P.C.

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712 WATERTOWN STREET
NEWTON
MASSACHUSETTS

SURVEY PLAN

REVISION BLOCK

DESCRIPTION DATE

Empty revision block table with columns for Description and Date.

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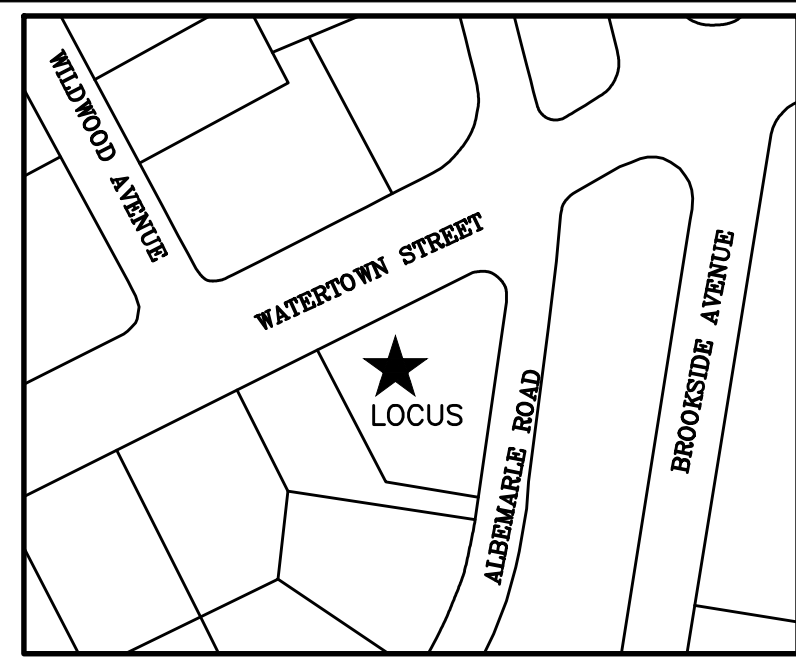
DATE: 09/11/24
DRAWN BY: O.S
CHECKED BY: E.S
APPROVED BY: C.C

EXISTING CONDITIONS

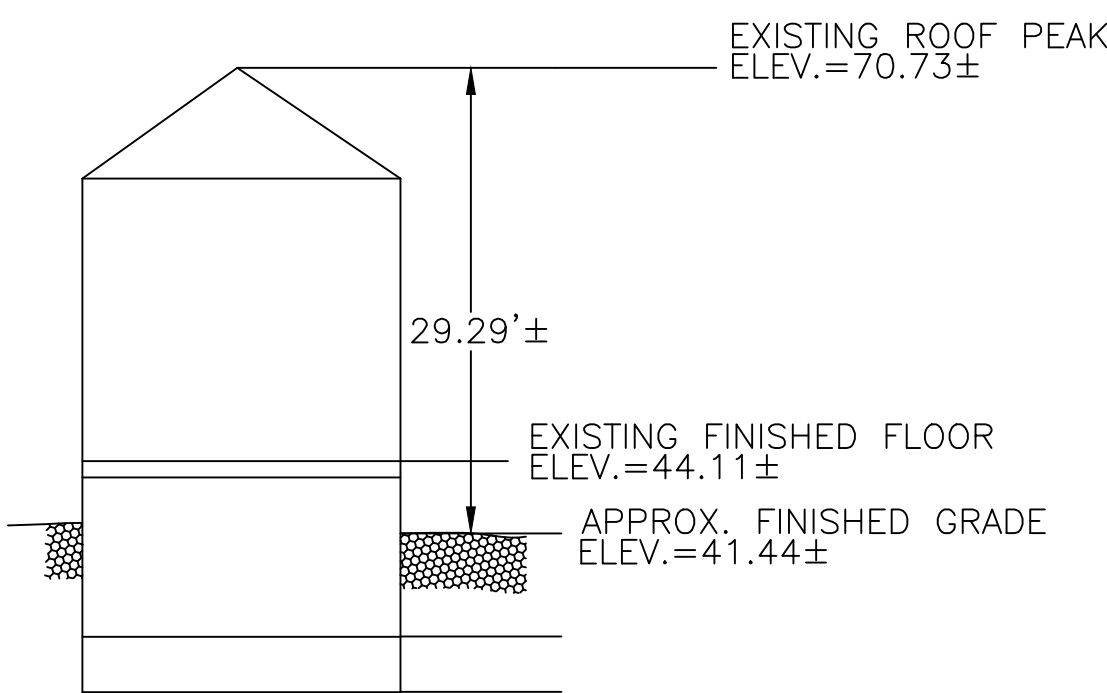
SHEET 1 OF 6

NOTES:

- 1. INFORMATION SHOWN ON THIS PLAN IS THE RESULT OF A FIELD SURVEY PERFORMED BY SPRUHAN ENGINEERING, P.C. AS OF 12/15/2023.
2. DEED REFERENCE: BOOK 12898, PAGE 716
3. THIS PLAN IS NOT INTENDED TO BE RECORDED.
4. I CERTIFY THAT THE DWELLING SHOWN IS NOT LOCATED WITHIN A SPECIAL FLOOD HAZARD ZONE...
5. THIS PLAN DOES NOT SHOW ANY UNRECORDED OR UNWRITTEN EASEMENTS WHICH MAY EXIST...
6. FIRST FLOOR ELEVATIONS ARE TAKEN AT THRESHOLD.
7. NO RESPONSIBILITY IS TAKEN FOR ZONING TABLE AS SPRUHAN ENGINEERING, P.C. ARE NOT ZONING EXPERTS...
8. THE LOCATION OF ALL UNDERGROUND UTILITIES SHOWN HEREON ARE APPROXIMATE AND ARE BASED ON THE FIELD LOCATION OF ALL VISIBLE STRUCTURES...
9. THE ELEVATIONS SHOWN ARE ON CITY OF NEWTON DATUM.
10. ZONING INFORMATION: MULTI RESIDENCE -1, LOT WAS CREATED BEFORE 12/07/1953.



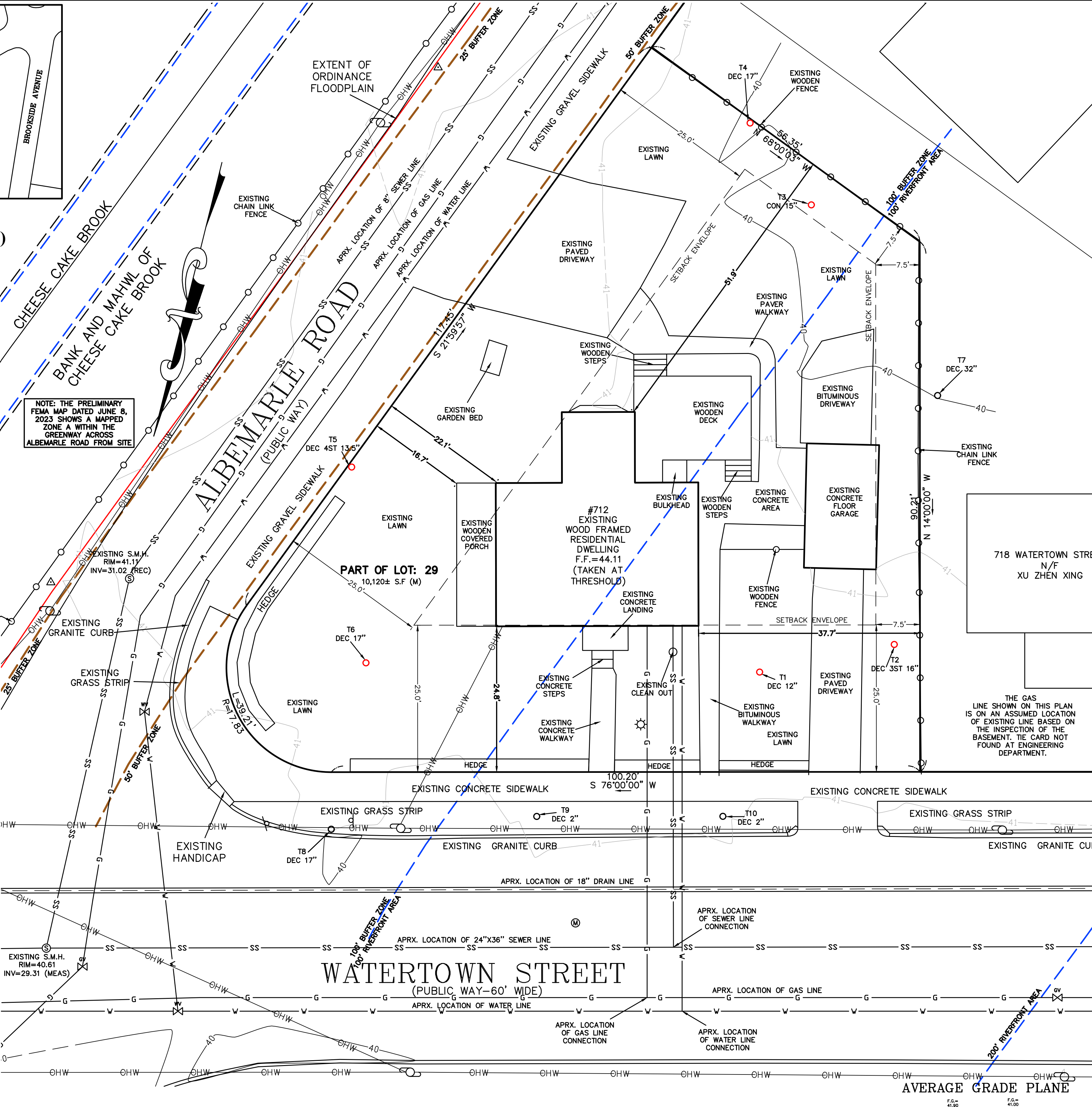
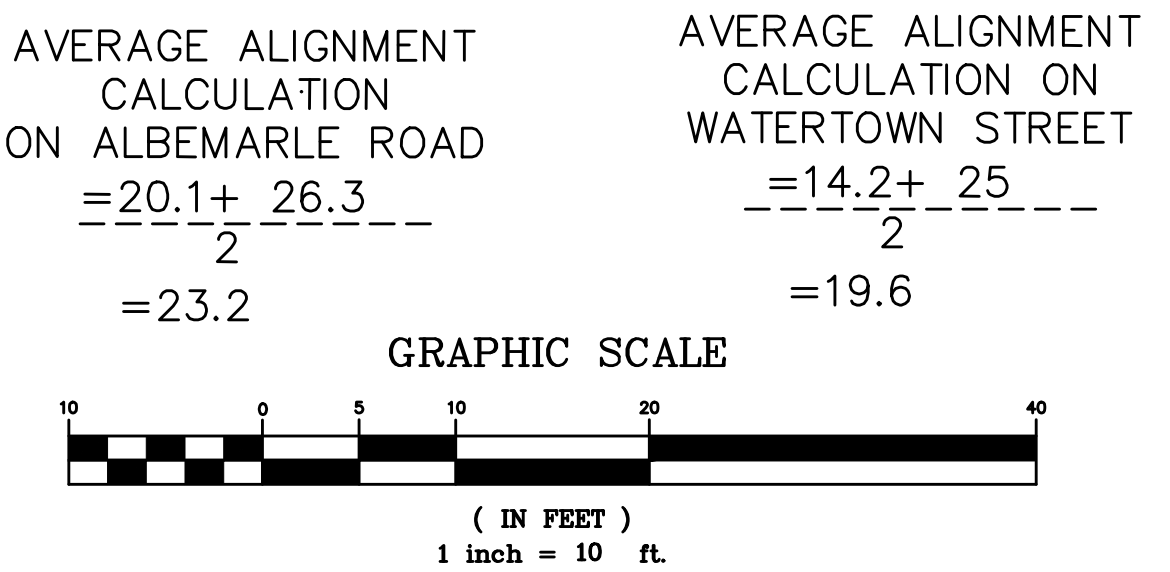
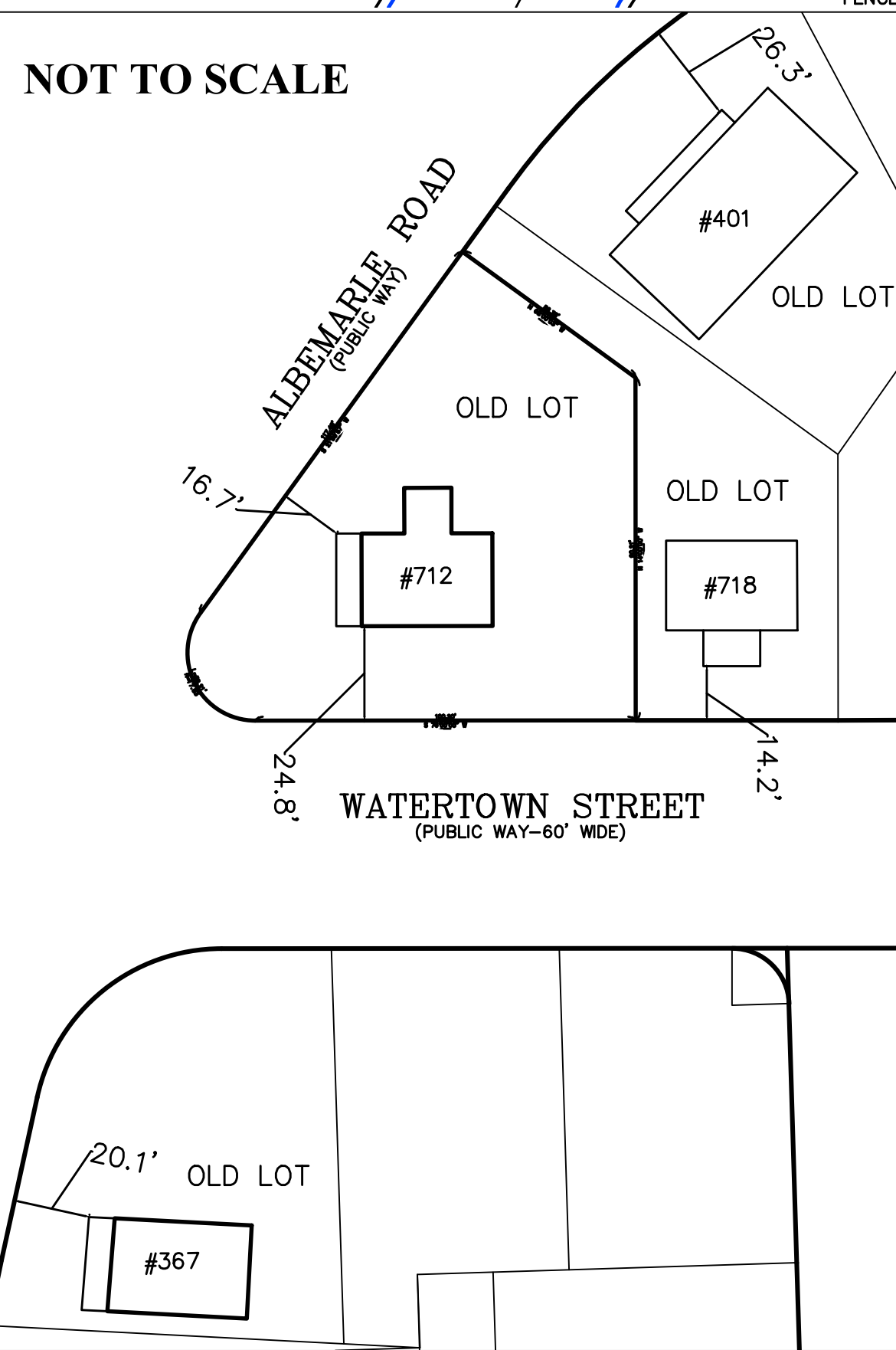
LOCUS MAP (NOT TO SCALE)



EXISTING PROFILE NOT TO SCALE

LEGEND

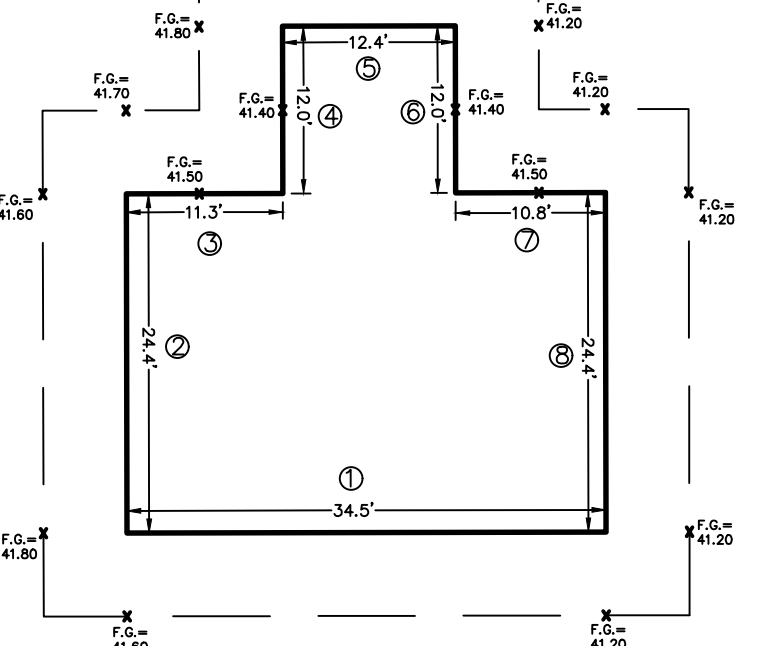
Legend table with symbols for Bound, Iron Pin/Pipe, Stone Post, Tree, Tree Stump, Shrubs/Flowers, Sign, Bollard, Sewer Manhole, Drain Manhole, Catch Basin, Water Manhole, Water Valve, Hydrant, Gas Valve, Electric Manhole, Utility Pole, Light Pole, Manhole, Spot Grade, Top of Wall, Bottom of Wall, Existing Building, Retaining Wall, Stone Wall, Fence, Tree Line, Sewer Line, Drain Line, Water Line, Gas Line, Underground Electric Line, Overhead Wires, Contour Line (MJR), and Contour Line (MNR).



I CERTIFY THAT THIS PLAN IS BASED ON AN ACTUAL FIELD SURVEY AND THE LATEST RECORD PLANS, DEEDS AND CERTIFICATES OF TITLE

CHRISTOPHER C. CHARLTON, P.L.S. DATE 09/03/2024

Average Grade Plane table with columns: SEGMENT, LENGTH, POINT 1, POINT 2, MEAN 1 & 2, MEAN x LENGTH. Total length 141.80, average grade 41.44.



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- 2. DEED REFERENCE: BOOK 12898, PAGE 716
PLAN REFERENCE 1: PLAN BOOK 143, PAGE 32
MIDDLESEX COUNTY SOUTH DISTRICT REGISTRY OF DEEDS
- 3. THIS PLAN IS NOT INTENDED TO BE RECORDED.
- 4. I CERTIFY THAT THE DWELLING SHOWN IS NOT LOCATED WITHIN A SPECIAL FLOOD HAZARD ZONE. IT IS LOCATED IN OTHER AREA: ZONE X, ON FLOOD HAZARD BOUNDARY MAP NUMBER 25017C0552E, IN COMMUNITY NUMBER: 250208, DATED 6/4/2010.
- 5. THIS PLAN DOES NOT SHOW ANY UNRECORDED OR UNWRITTEN EASEMENTS WHICH MAY EXIST. A REASONABLE AND DILIGENT ATTEMPT HAS BEEN MADE TO OBSERVE ANY APPARENT USES OF THE LAND; HOWEVER THIS NOT CONSTITUTE A GUARANTEE THAT NO SUCH EASEMENTS EXIST.
- 6. FIRST FLOOR ELEVATIONS ARE TAKEN AT THRESHOLD.
- 7. NO RESPONSIBILITY IS TAKEN FOR ZONING TABLE AS SPRUHAN ENGINEERING, P.C. ARE NOT ZONING EXPERTS. TABLE IS TAKEN FROM TABLE PROVIDED BY LOCAL ZONING ORDINANCE. CLIENT AND/OR ARCHITECT TO VERIFY THE ACCURACY OF ZONING ANALYSIS.
- 8. THE LOCATION OF ALL UNDERGROUND UTILITIES SHOWN HEREON ARE APPROXIMATE AND ARE BASED ON THE FIELD LOCATION OF ALL VISIBLE STRUCTURES SUCH AS CATCH BASINS, MANHOLES, WATER VALVES, ETC. AND COMPILED FROM PLANS SUPPLIED BY GOVERNMENT AGENCIES.
- 9. THE ELEVATIONS SHOWN ARE ON CITY OF NEWTON DATUM.
- 10. ZONING INFORMATION: MULTI RESIDENCE -1, LOT WAS CREATED BEFORE 12/07/1953.

LEGEND

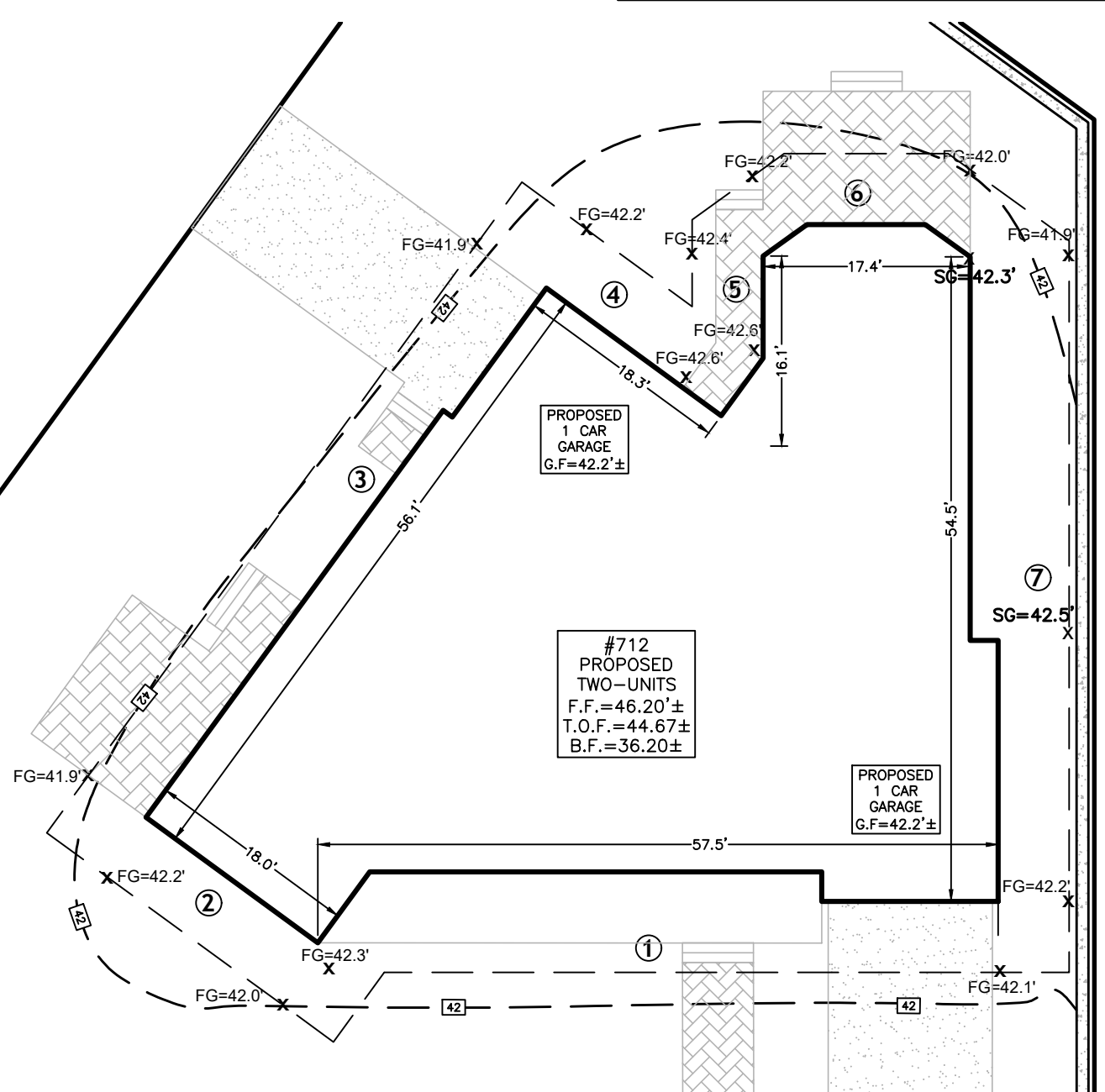
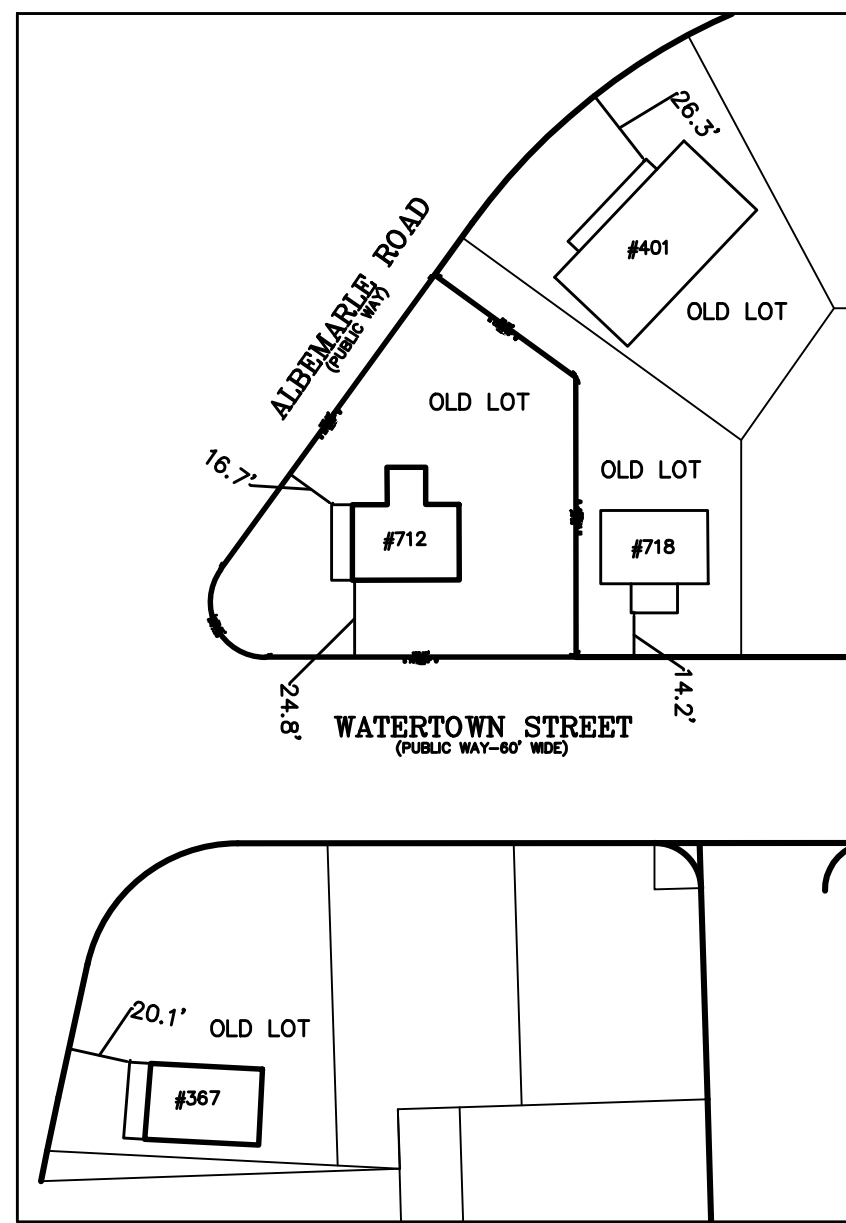
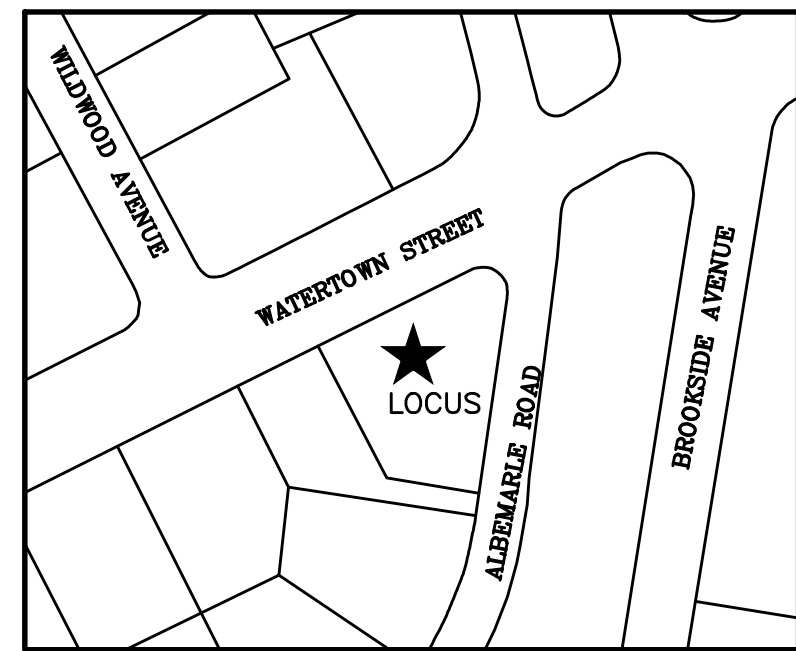
- Utility Pole: UTP
- Water Gate: WG
- Hydrant: H
- Gas Gate: GG
- Sewer Manhole: SM
- Cleanout: CO
- Drain Manhole: DM
- Catch Basin: CB
- Tree: T
- Light Pole: LP
- Sign: S
- TBR: TO BE REMOVED
- TBA: TO BE ABANDONED
- TOW: TOP OF WALL
- BOW: BOTTOM OF WALL
- FG: FINISHED GRADE
- SG: SPOT GRADE
- FF: FIRST FLOOR
- TOF: TOP OF FOUNDATION
- BF: BASEMENT FLOOR
- GF: GARAGE FLOOR
- THH: DEEP TEST HOLE
- PTH: PERCOLATION TEST
- 71.4 X: SPOT ELEVATION
- [Symbol]: PROPOSED CONTOUR
- 71: EXISTING CONTOUR
- D: DRAIN LINE
- W: WATER LINE
- SS: SEWER LINE
- G: GAS LINE
- F: FENCE
- [Symbol]: PROPOSED WALL

NOT TO SCALE

AVERAGE ALIGNMENT CALCULATION ON ALBEMARLE ROAD
 $= \frac{20.1 + 26.3}{2} = 23.2$

AVERAGE ALIGNMENT CALCULATION ON WATERTOWN STREET
 $= \frac{14.2 + 25}{2} = 19.6$

LOCUS MAP (NOT TO SCALE)

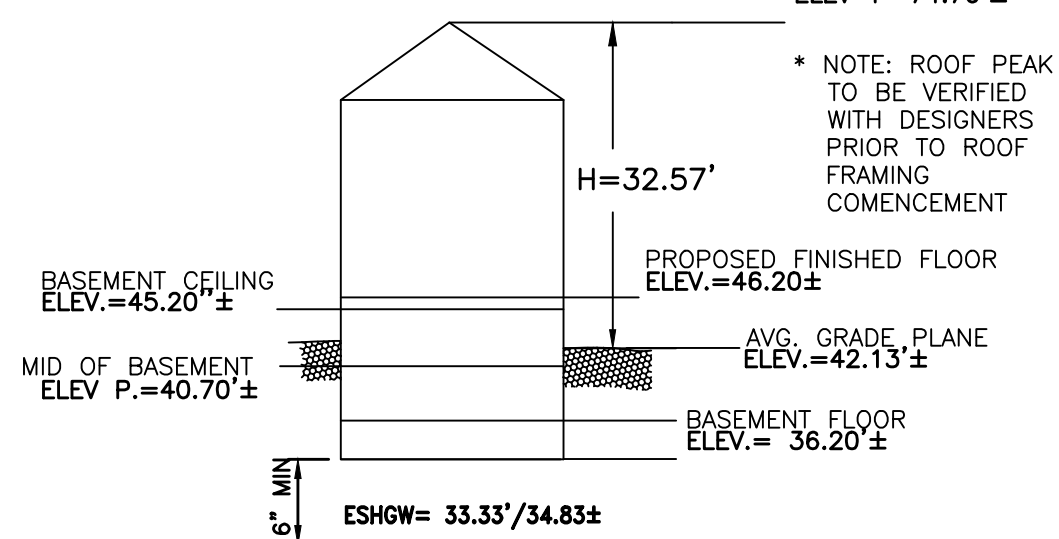


LOT COV.
 HOUSE: 2,777 S.F + PORCH: 243 S.F
 $\frac{3,020 \text{ S.F}}{10,120 \text{ SF}} \times 100 = 29.84\%$

OPEN SPACE
 LANDSCAPE: 5,630 S.F + WALKWAY: 114 S.F
 $\frac{5,744 \text{ S.F}}{10,120 \text{ SF}} \times 100 = 56.76\%$

AVERAGE GRADE PLANE (ALL UNITS IN FEET)

SEGMENT	LENGTH	POINT 1	POINT 2	MEAN 1 & 2	MEAN x LENGTH
1	57.50	42.20	42.30	42.25	2,429.38
2	18.00	42.00	42.20	42.10	757.80
3	56.10	41.90	41.90	41.90	2,350.59
4	18.30	42.20	42.60	42.40	775.92
5	16.10	42.60	42.40	42.50	684.25
6	17.40	42.20	42.00	42.10	732.54
7	54.50	41.90	42.20	42.05	2,291.73
SUM =	237.90				10,022.20
SUM OF MEAN x LENGTH/SUM OF LENGTHS = AVERAGE GRADE PLANE =					42.13



PROPOSED PROFILE NOT TO SCALE

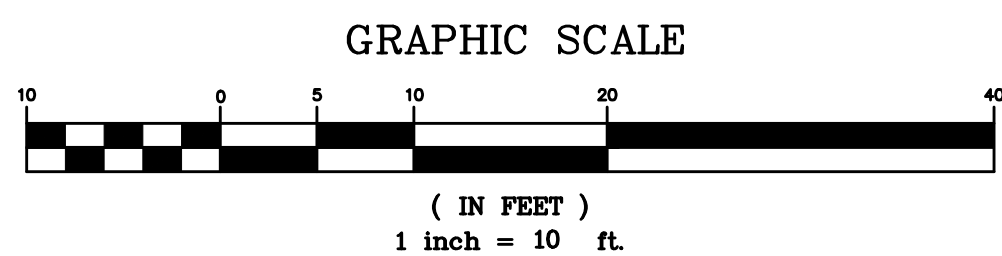
* MIDPOINT OF BASEMENT ELEVATION LOWER THAN AVERAGE GRADE ELEVATION THEREFORE PROPOSED BASEMENT MEETS DEFINITION OF BASEMENT

ZONING LEGEND
 ZONING DISTRICT: MULTI RESIDENCE-1 (LOT CREATED BEFORE 12/07/1953)

	REQUIRED	PROPOSED	
MIN. AREA	7,000 S.F	10,120± S.F	
MIN. FRONTAGE	70'	100.2'	
MIN. YARD FRONT	19.6'/23.2' *	20.6'/26.2'	
SIDE	REAR	7.5'	8.1'
	FRONT	15'	15.6'
MAX. LOT COV.	30%	29.84%	
MIN. OPEN SPACE	50%	56.76%	
MAX. BLDG. HEIGHT	36'	32.57'	

*AVERAGE ALIGNMENT WATERTOWN ST/ALBEMARLE RD

WATERTOWN STREET (PUBLIC WAY-60' WIDE)



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CIVIL PLAN

REVISION BLOCK

DESCRIPTION	DATE

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EDMOND J. SPRUHAN
 CIVIL ENGINEER
 REG. NO. 83316
 PROFESSIONAL ENGINEER

CHRISTOPHER C. CHARLTON
 CIVIL ENGINEER
 REG. NO. 48849
 PROFESSIONAL ENGINEER AND SURVEYOR

09/11/24 09/11/24

DATE: 09/03/2024
 DRAWN BY: O.G
 CHECKED BY: C.C
 APPROVED BY: F.S



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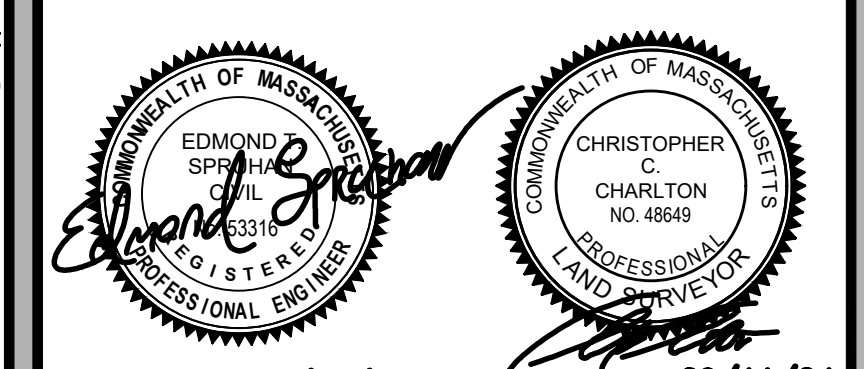
712 WATERTOWN STREET NEWTON MASSACHUSETTS

CIVIL PLAN

REVISION BLOCK

Table with 2 columns: DESCRIPTION, DATE. Multiple empty rows for revisions.

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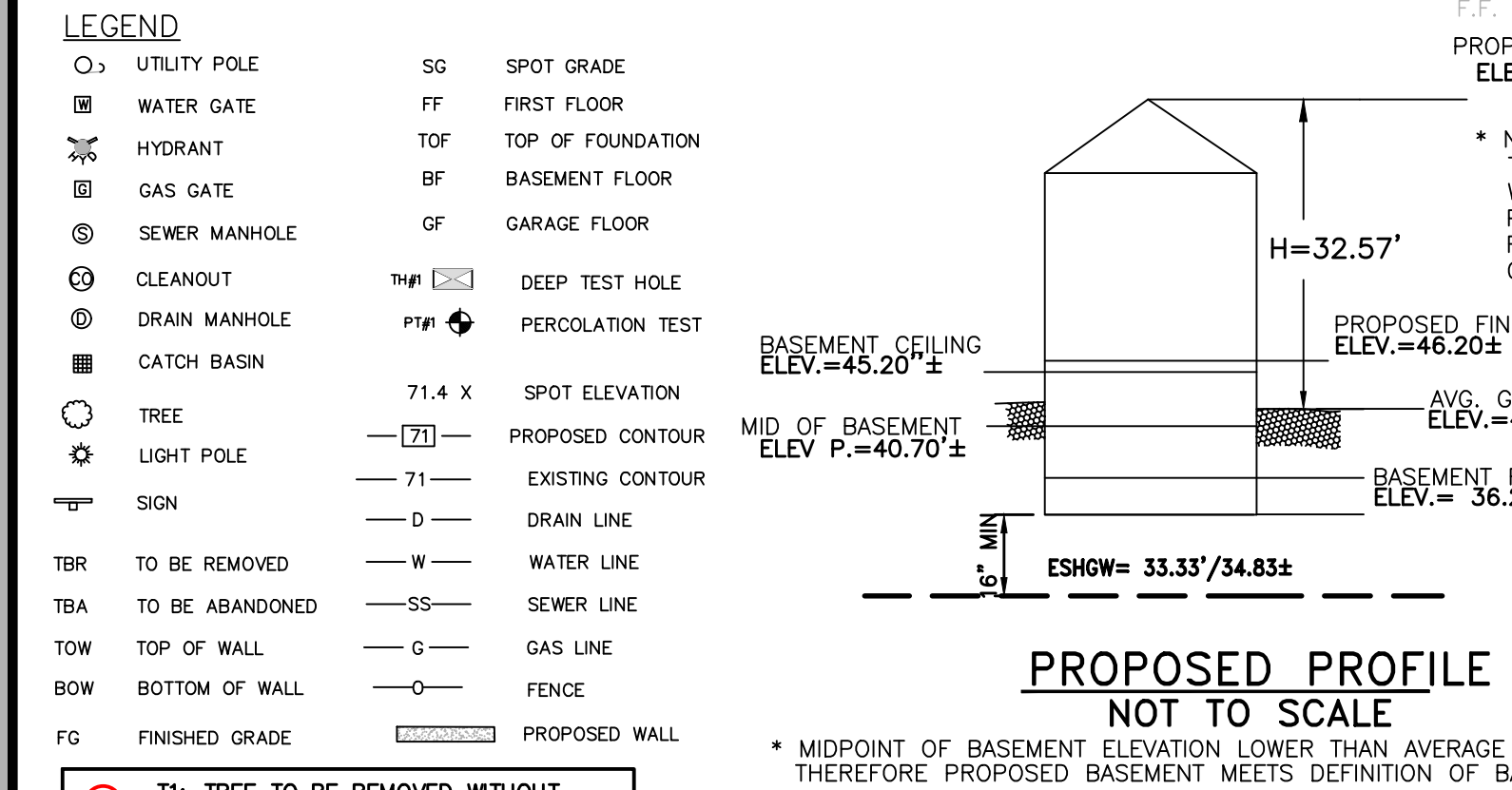


DATE: 09/03/2024 DRAWN BY: O.G. CHECKED BY: C.C. APPROVED BY: E.S.

CIVIL PLAN

SHEET 3 OF 6

- NOTES: 1. INFORMATION SHOWN ON THIS PLAN IS THE RESULT OF A FIELD SURVEY PERFORMED BY SPRUHAN ENGINEERING, P.C. AS OF 12/15/2023. 2. DEED REFERENCE: BOOK 12898, PAGE 716...

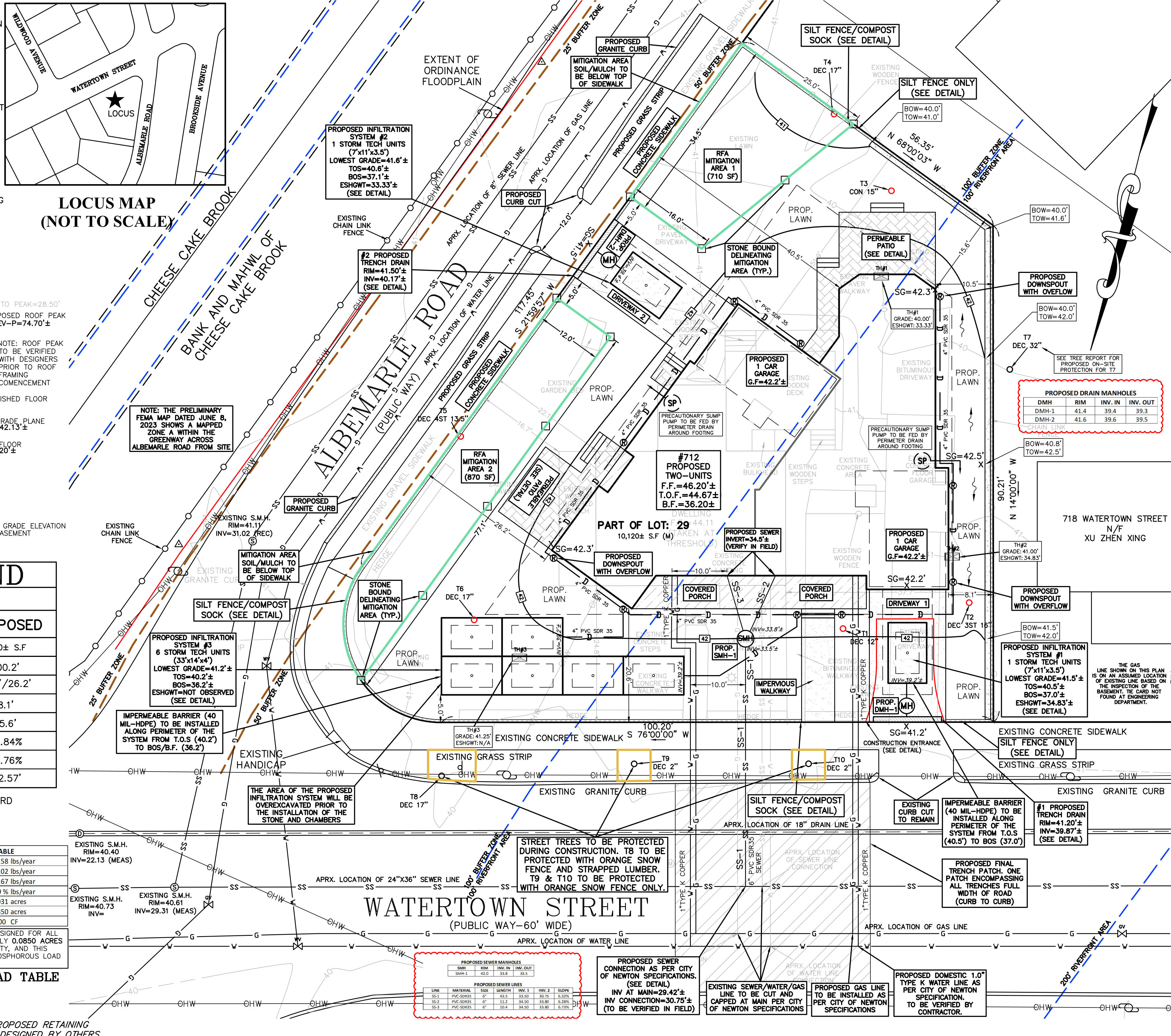


ZONING LEGEND table with columns: REQUIRED, PROPOSED. Rows include MIN. AREA, MIN. FRONTAGE, MIN. YARD FRONT, etc.

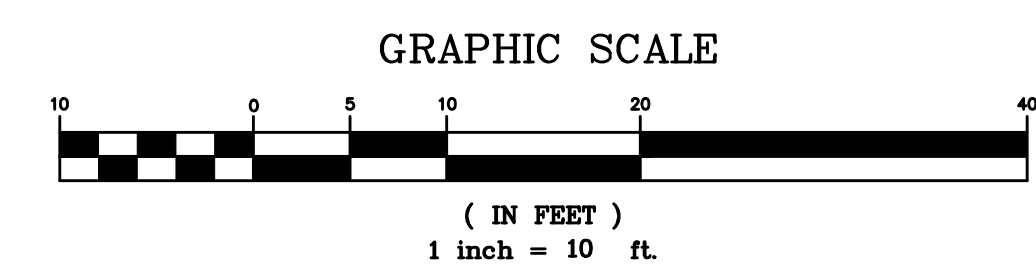
FOR DETAILED INFORMATION, PLEASE REFER TO THE TREE REPORT PREPARED BY KRAY A. SMALL DATED MAY 4, 2024.

DRAINAGE AREA SUMMARY table with rows for EXISTING ROOF, EXISTING GARAGE, EXISTING COVERED PORCH, etc.

DEGRADED AREA SUMMARY table with rows for EXISTING ROOF, EXISTING GARAGE, EXISTING COVERED PORCH, etc.



PHOSPHORUS LOAD TABLE, ZONING LEGEND, and various engineering notes (NOTE #1 through #16) located at the bottom of the plan.



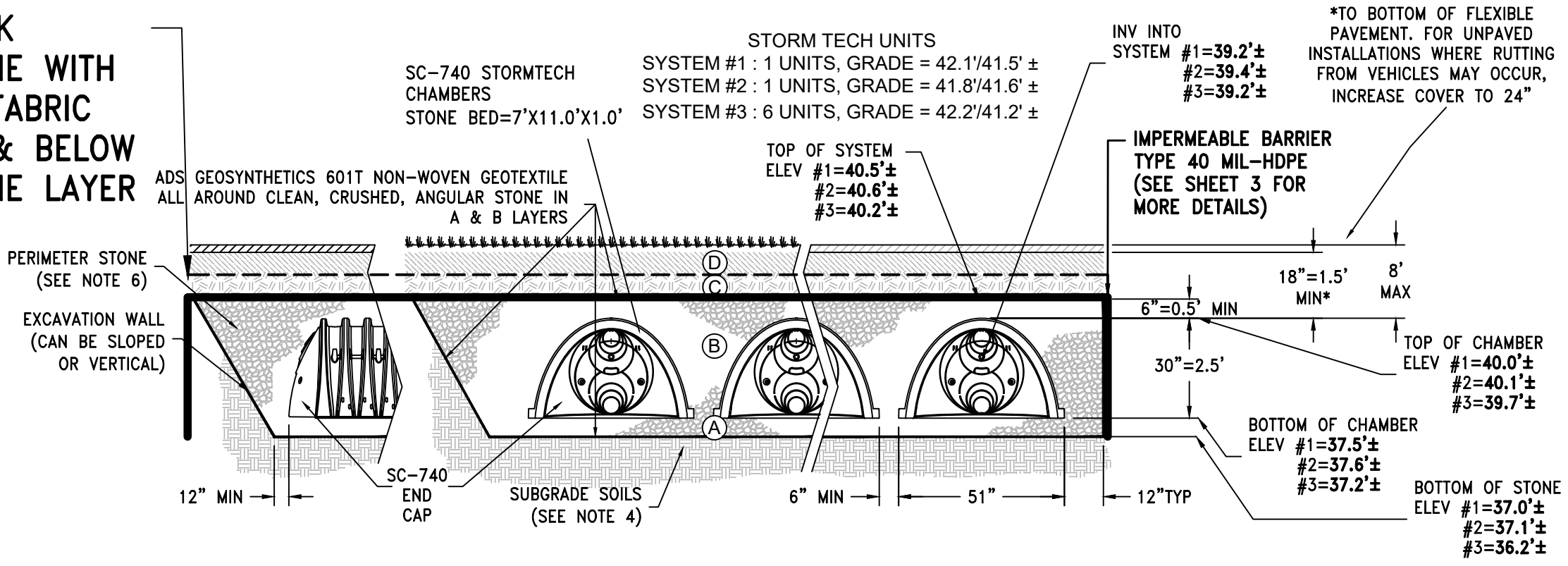
ACCEPTABLE FILL MATERIALS: STORMTECH SC-740 CHAMBER SYSTEMS

Table with 4 columns: MATERIAL LOCATION, DESCRIPTION, ASHTO MATERIAL CLASSIFICATIONS, COMPACTION / DENSITY REQUIREMENT.

PLEASE NOTE:

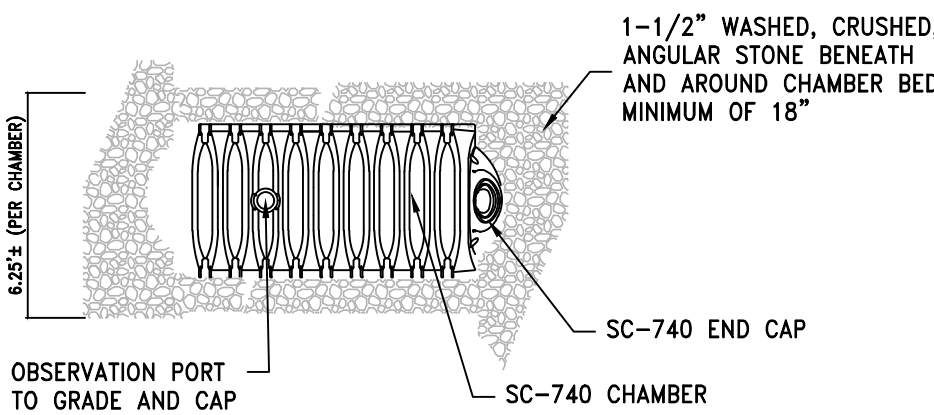
- 1. THE LISTED ASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY...
2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS...
3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION...

3" THICK PEASTONE WITH FILTER FABRIC ABOVE & BELOW PEASTONE LAYER



NOTES:

- 1. SC-740 CHAMBERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F2418...
2. SC-740 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787...
3. "ACCEPTABLE FILL MATERIALS" TABLE ABOVE PROVIDES MATERIAL LOCATIONS...



STORMTECH SC-740 CHAMBER SYSTEM PLAN VIEW DETAIL

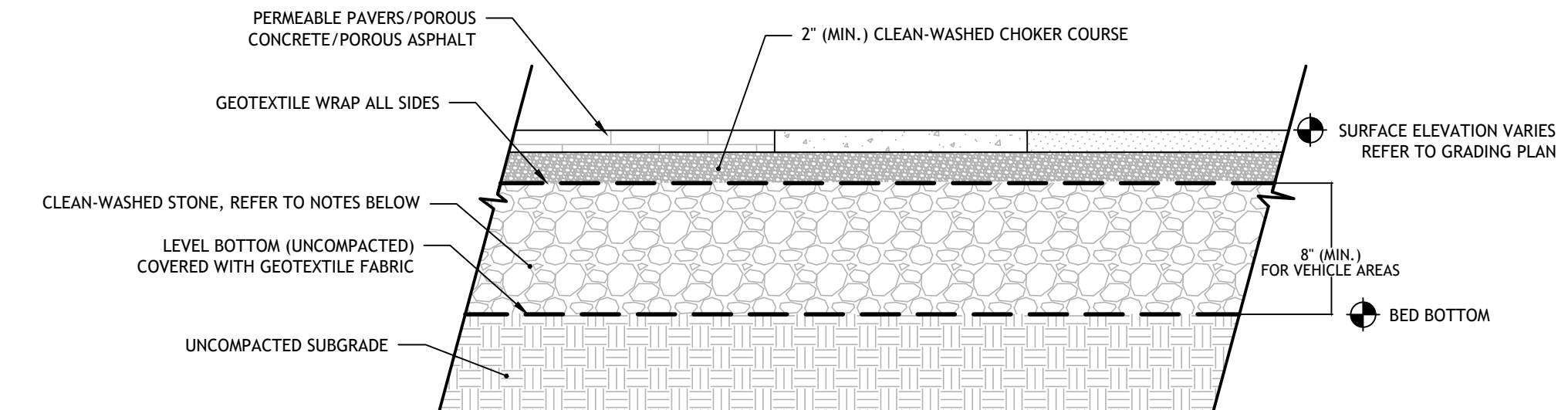
DEEP OBSERVATION HOLE LOG:

GENERAL SOIL CONDITIONS FOR THE AREA PERFORMED AT 712 WATERTOWN ST, NEWTON, MA. BY MATTHEW WUI, SOIL EVALUATOR #14259 REPRESENTING SPRUHAN ENGINEERING, P.C.

Table with columns: DEEP OBSERVATION HOLE NUMBER, MATERIAL, COLOR, PERCENT, TESTS, etc.

Table with columns: DEEP OBSERVATION HOLE NUMBER, MATERIAL, COLOR, PERCENT, TESTS, etc.

Table with columns: DEEP OBSERVATION HOLE NUMBER, MATERIAL, COLOR, PERCENT, TESTS, etc.



TYPICAL PERMEABLE PAVERS DETAIL

N.T.S.

NOTES:

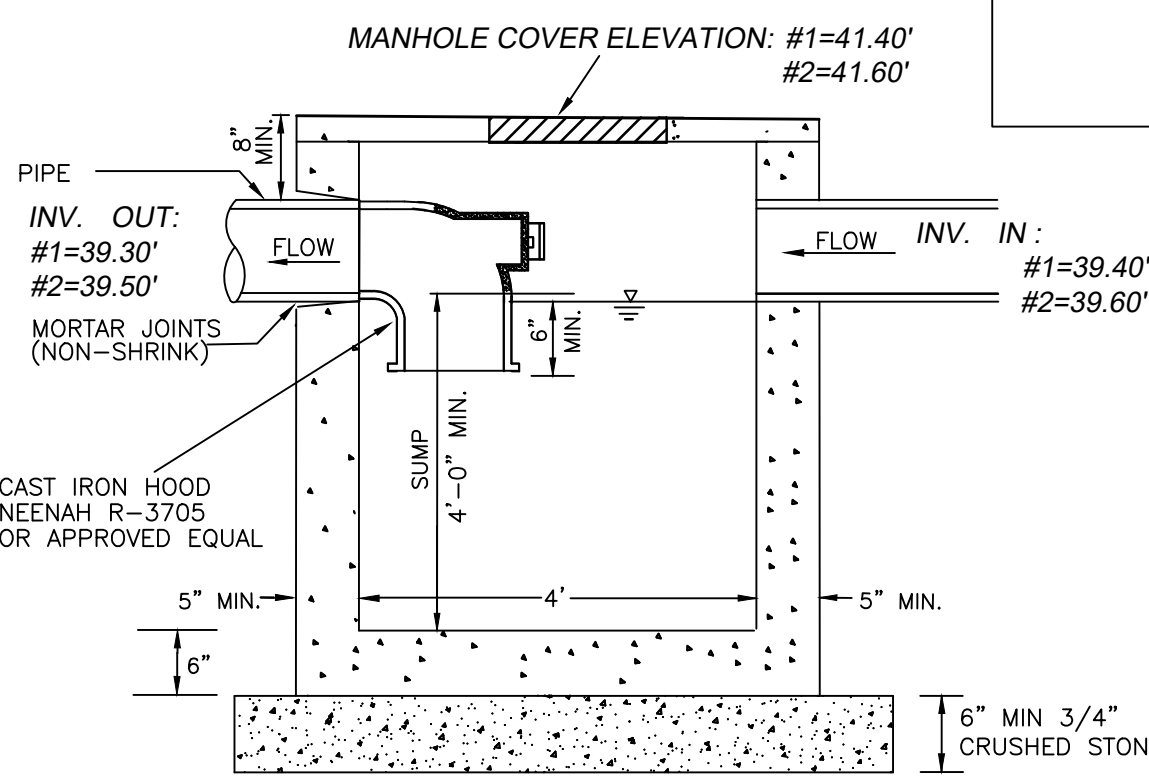
- 1. UNSUITABLE MATERIAL WILL BE REMOVED AND REPLACED WITH SUITABLE MATERIAL...
2. ALL AGGREGATES WITHIN POROUS PAVES BED SHALL BE CLEAN-WASHED...
3. CHOKER COURSE AGGREGATE SHALL MEET THE FOLLOWING SPECIFICATIONS:

Table: REQUIRED CHOKER COURSE GRADATION. Columns: U.S. STANDARD SIEVE SIZE, PERCENT PASSING.

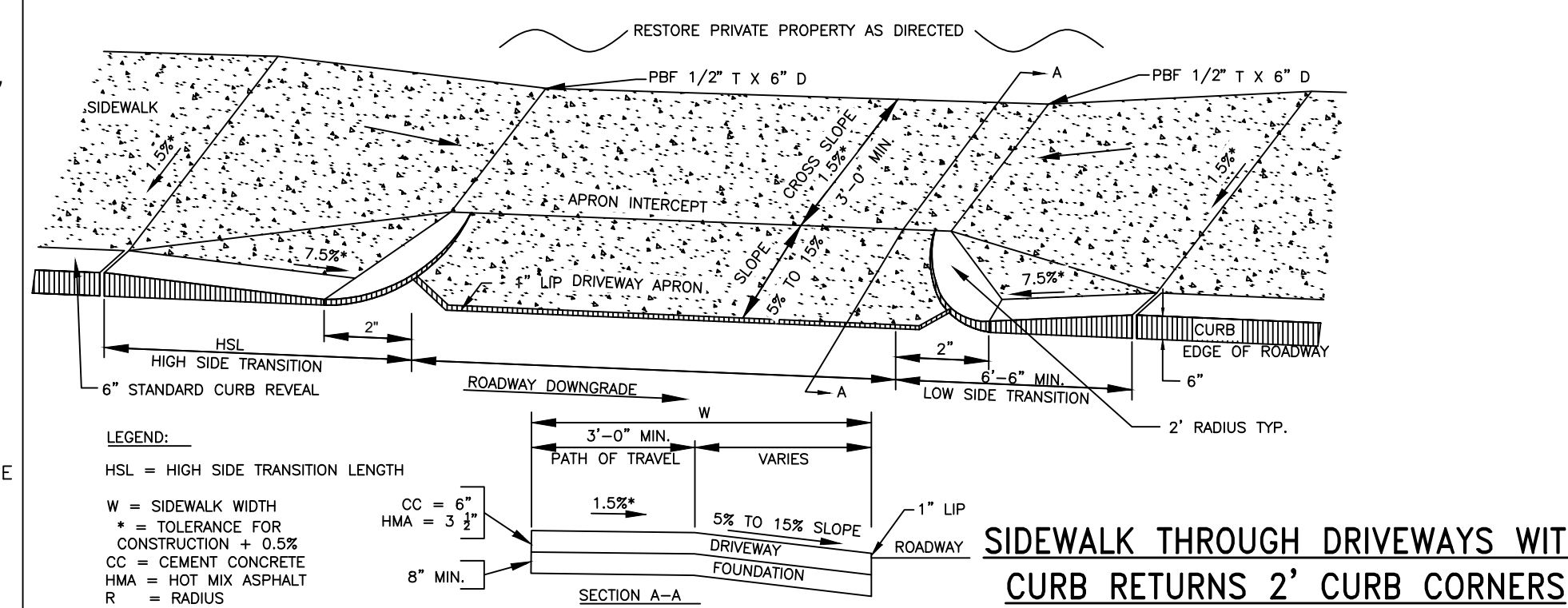
- 4. GEOTEXTILE SHALL CONSIST OF POLYPROPYLENE FIBERS AND MEET THE FOLLOWING SPECIFICATIONS...
5. PERMEABLE PAVES AND GRID SYSTEMS:
- PERMEABLE PAVES AND GRID SYSTEMS SHALL CONFORM TO MANUFACTURER SPECIFICATIONS...
- THE SYSTEMS SHALL HAVE A MINIMUM FLOW THROUGH RATE OF 5 IN/HR...
- GRAVEL USED IN INTERLOCKING CONCRETE PAVERS OR PLASTIC GRID SYSTEMS MUST BE WELL GRADED AND WASHED TO ENSURE PERMEABILITY.

- 6. DESIGN ENGINEER WILL INSPECT AND CERTIFY IN WRITING THAT ALL DRAINAGE WORK WAS INSTALLED IN ACCORDANCE WITH APPROVED PLANS...
7. GEOTEXTILE SHALL CONSIST OF POLYPROPYLENE FIBERS AND MEET THE FOLLOWING SPECIFICATIONS...

DESIGN ENGINEER WILL INSPECT AND CERTIFY IN WRITING THAT ALL DRAINAGE WORK WAS INSTALLED IN ACCORDANCE WITH APPROVED PLANS. CONTRACTOR TO NOTIFY ENGINEER AT LEAST 72 HOURS IN ADVANCE FOR DRAINAGE SYSTEM INSPECTION PRIOR TO BACKFILLING.

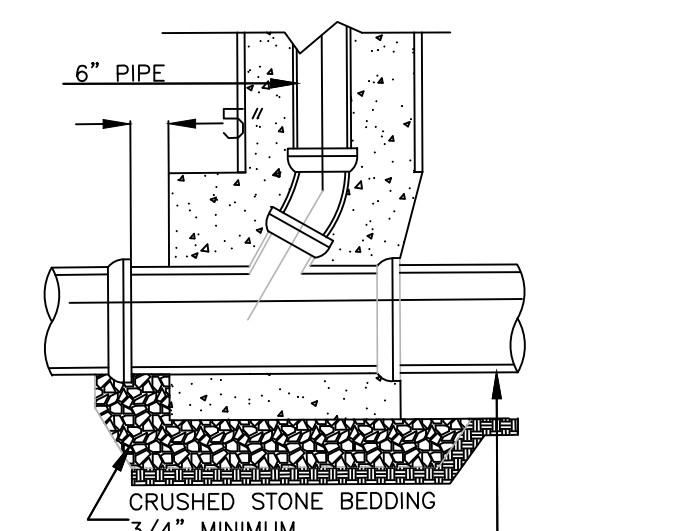


TYPICAL DRAIN MANHOLE DETAIL N.T.S.

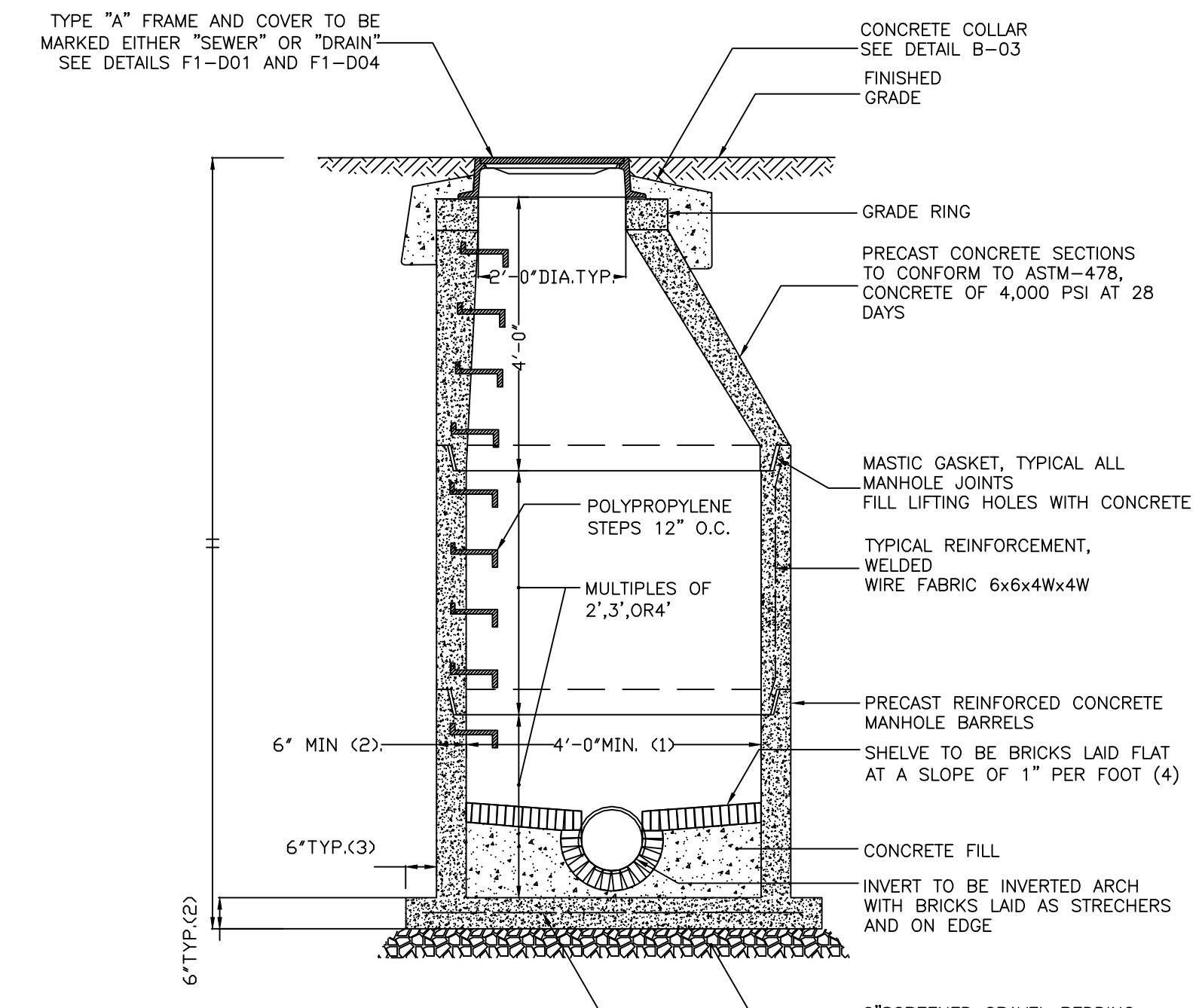


LEGEND: HSL = HIGH SIDE TRANSITION LENGTH, W = SIDEWALK WIDTH, CC = CEMENT CONCRETE, HMA = HOT MAX ASPHALT, R = RADIUS.

SIDEWALK THROUGH DRIVEWAYS WITH CURB RETURNS 2' CURB CORNERS



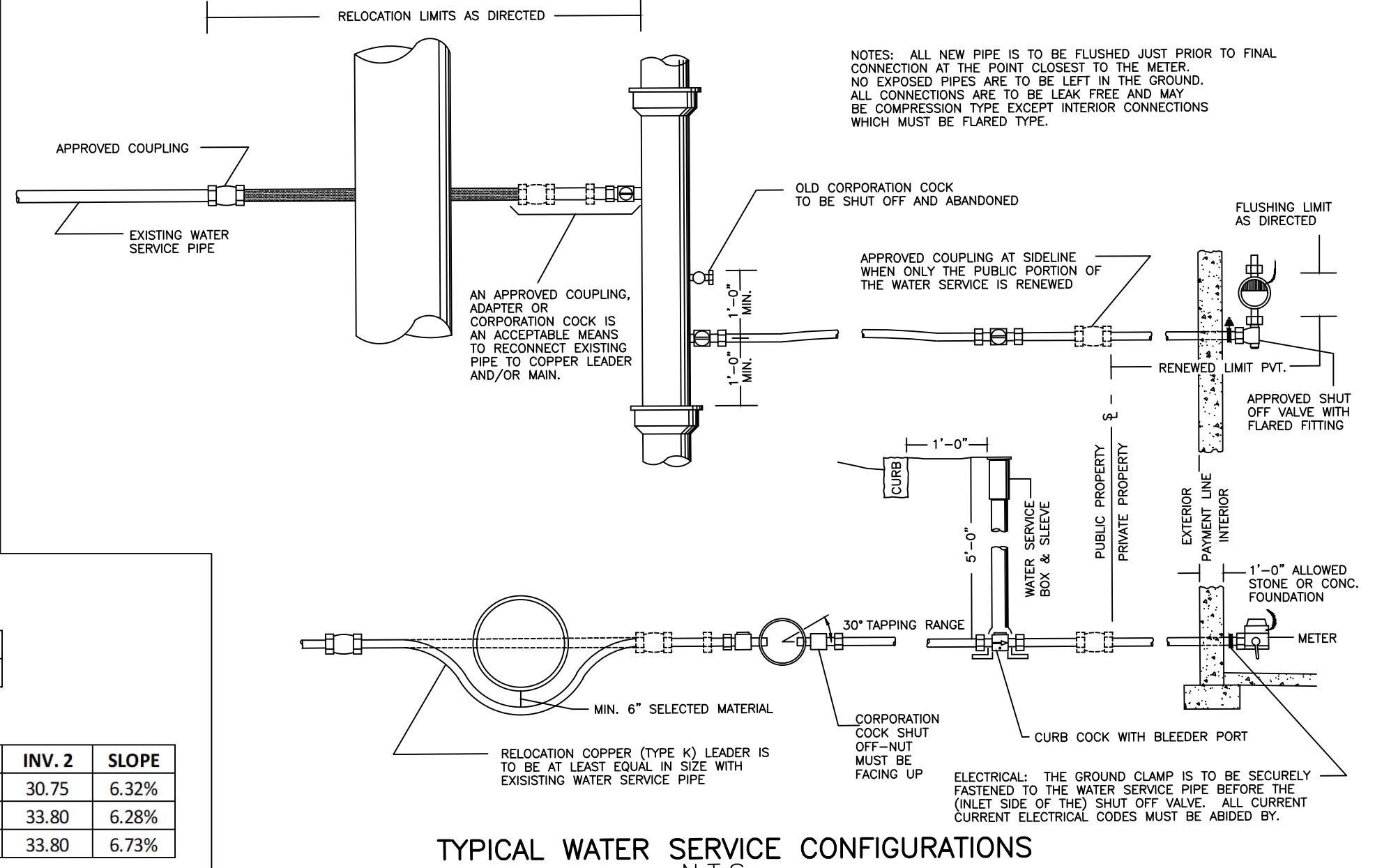
TYPICAL DOWNSPOUT DETAIL N.T.S.



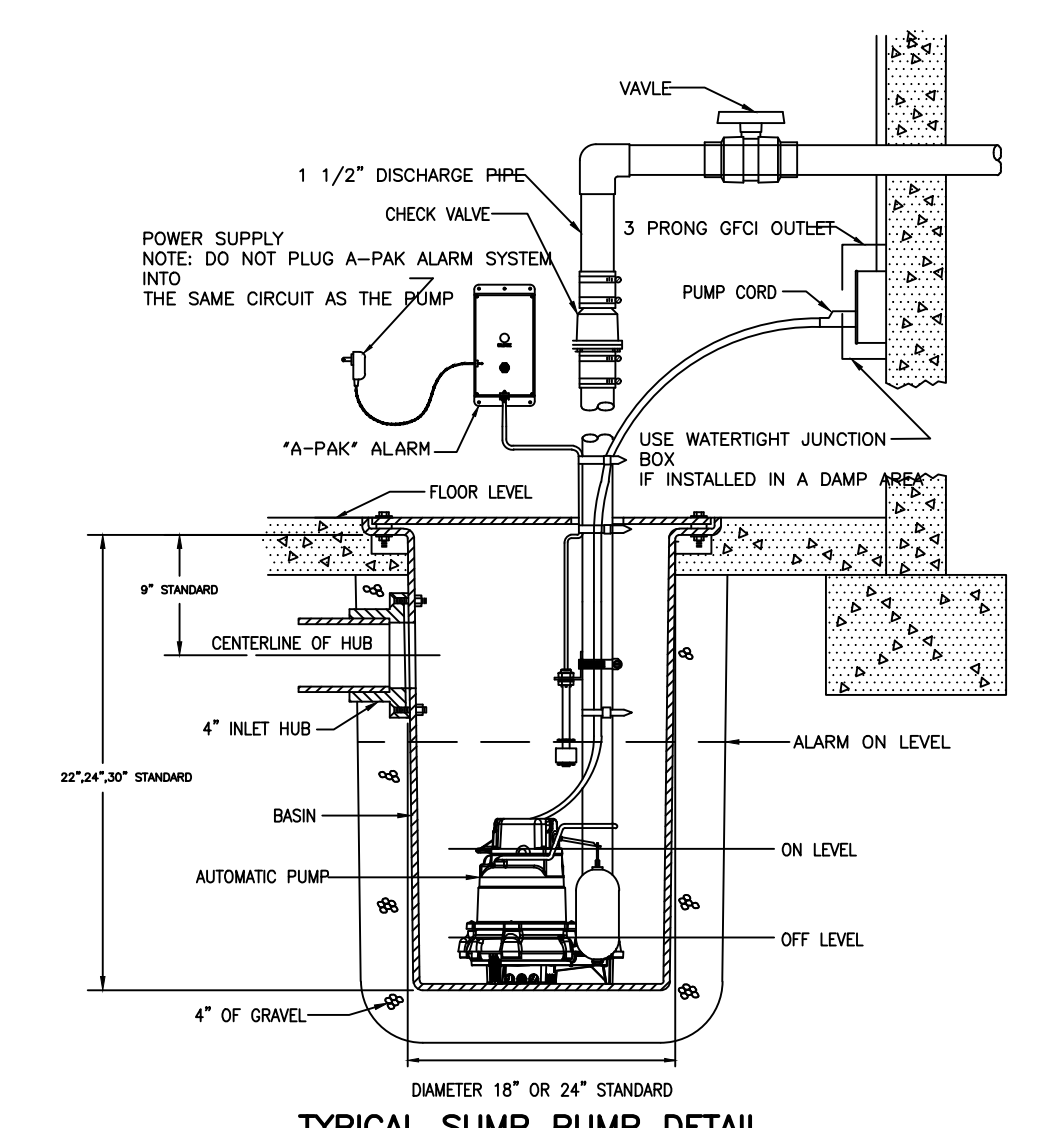
SEWER MANHOLE DETAIL

Table: PROPOSED SEWER MANHOLES. Columns: SMH, RIM, INV. IN, INV. OUT.

Table: PROPOSED SEWER LINES. Columns: LINE, MATERIAL, SIZE, LENGTH, INV. 1, INV. 2, SLOPE.



TYPICAL WATER SERVICE CONFIGURATIONS N.T.S.



TYPICAL SUMP PUMP DETAIL



Spruhan Engineering, P.C.

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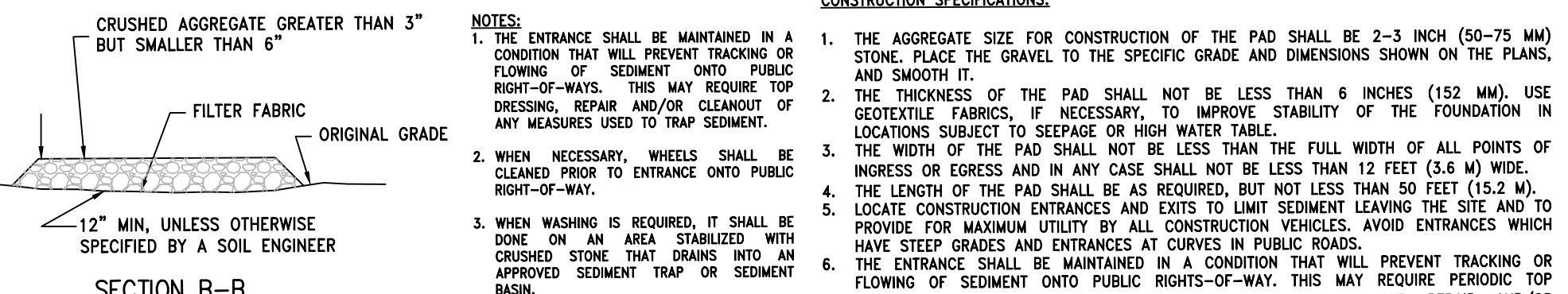


09/11/24

DATE: 09/03/2024 DRAWN BY: O.G. CHECKED BY: C.C. APPROVED BY: F.S.

DETAILS

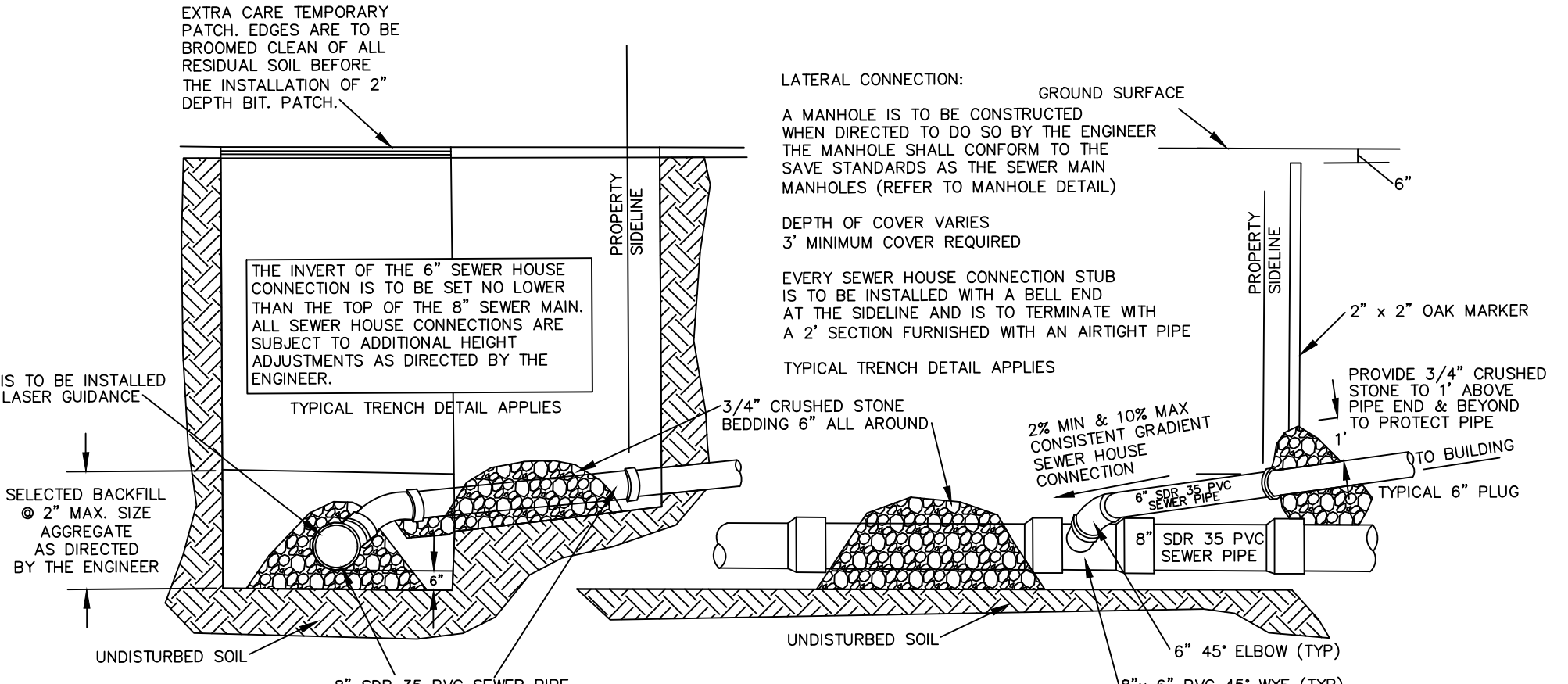
SHEET 4 OF 6



- NOTES:**
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
 2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
 3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.
- CONSTRUCTION SPECIFICATIONS:**
1. THE AGGREGATE SIZE FOR CONSTRUCTION OF THE PAD SHALL BE 2-3 INCH (50-75 MM) STONE, PLACE THE GRAVEL TO THE SPECIFIC GRADE AND DIMENSIONS SHOWN ON THE PLANS, AND SMOOTH IT.
 2. THE THICKNESS OF THE PAD SHALL NOT BE LESS THAN 6 INCHES (152 MM). USE GEOTEXTILE FABRICS, IF NECESSARY, TO IMPROVE STABILITY OF THE FOUNDATION IN LOCATIONS SUBJECT TO SEPARATE HIGH WATER TABLE.
 3. THE WIDTH OF THE PAD SHALL NOT BE LESS THAN THE FULL WIDTH OF ALL POINTS OF INGRESS OR EGRESS AND IN ANY CASE SHALL NOT BE LESS THAN 12 FEET (3.6 M) WIDE.
 4. THE LENGTH OF THE PAD SHALL BE AS REQUIRED, BUT NOT LESS THAN 50 FEET (15.2 M).
 5. LOCATE CONSTRUCTION ENTRANCES AND EXITS TO LIMIT SEDIMENT LEAVING THE SITE AND TO PROVIDE FOR MAXIMUM UTILITY BY ALL CONSTRUCTION VEHICLES. AVOID ENTRANCES WHICH HAVE STEEP GRADES AND ENTRANCES AT CURVES IN PUBLIC ROADS.
 6. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND, AND REPAIR AND/OR MAINTENANCE OF ANY MEASURES USED TO TRAP SEDIMENT.
 7. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY SHALL BE REMOVED IMMEDIATELY.
 8. PROVIDE DRAINAGE TO CARRY WATER TO A SEDIMENT TRAP OR OTHER SUITABLE OUTLET.
 9. WHEN NECESSARY, WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN. SEE SEDIMENT BASIN DWP.
 10. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE THROUGH USE OF SAND BAGS, GRAVEL, STRAW BALES, OR OTHER APPROVED METHODS.
- INSPECTION AND MAINTENANCE:**
11. MAINTAIN THE GRAVEL PAD IN A CONDITION TO PREVENT MUD OR SEDIMENT FROM LEAVING THE CONSTRUCTION SITE.
 12. REPLACE GRAVEL MATERIAL WHEN SURFACE VOIDS ARE NOT VISIBLE.
 13. AFTER EACH RAINFALL, INSPECT ANY STRUCTURE USED TO TRAP SEDIMENT AND CLEAN IT OUT AS NECESSARY.
 14. IMMEDIATELY REMOVE ALL OBJECTIONABLE MATERIALS SPILLED, WASHED, OR TRACKED ONTO PUBLIC ROADWAYS. REMOVE ALL SEDIMENT DEPOSITED ON PAVED ROADWAYS WITHIN 24 HOURS.

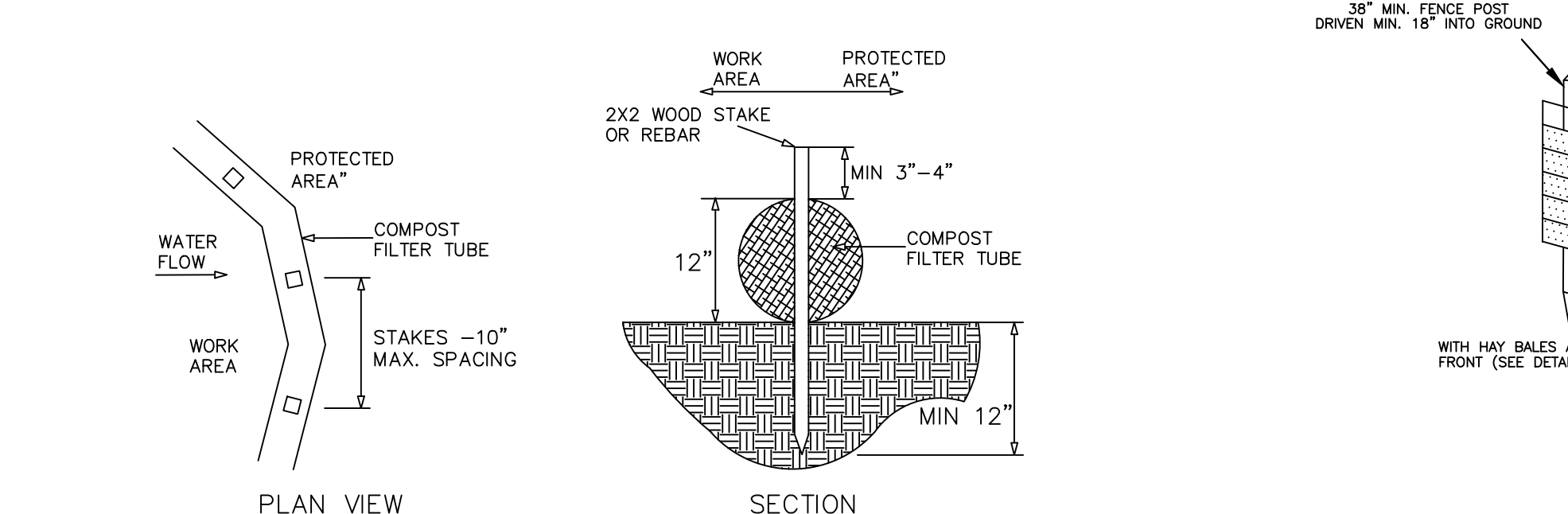


STABILIZED CONSTRUCTION ENTRANCE DETAIL
N.T.S.



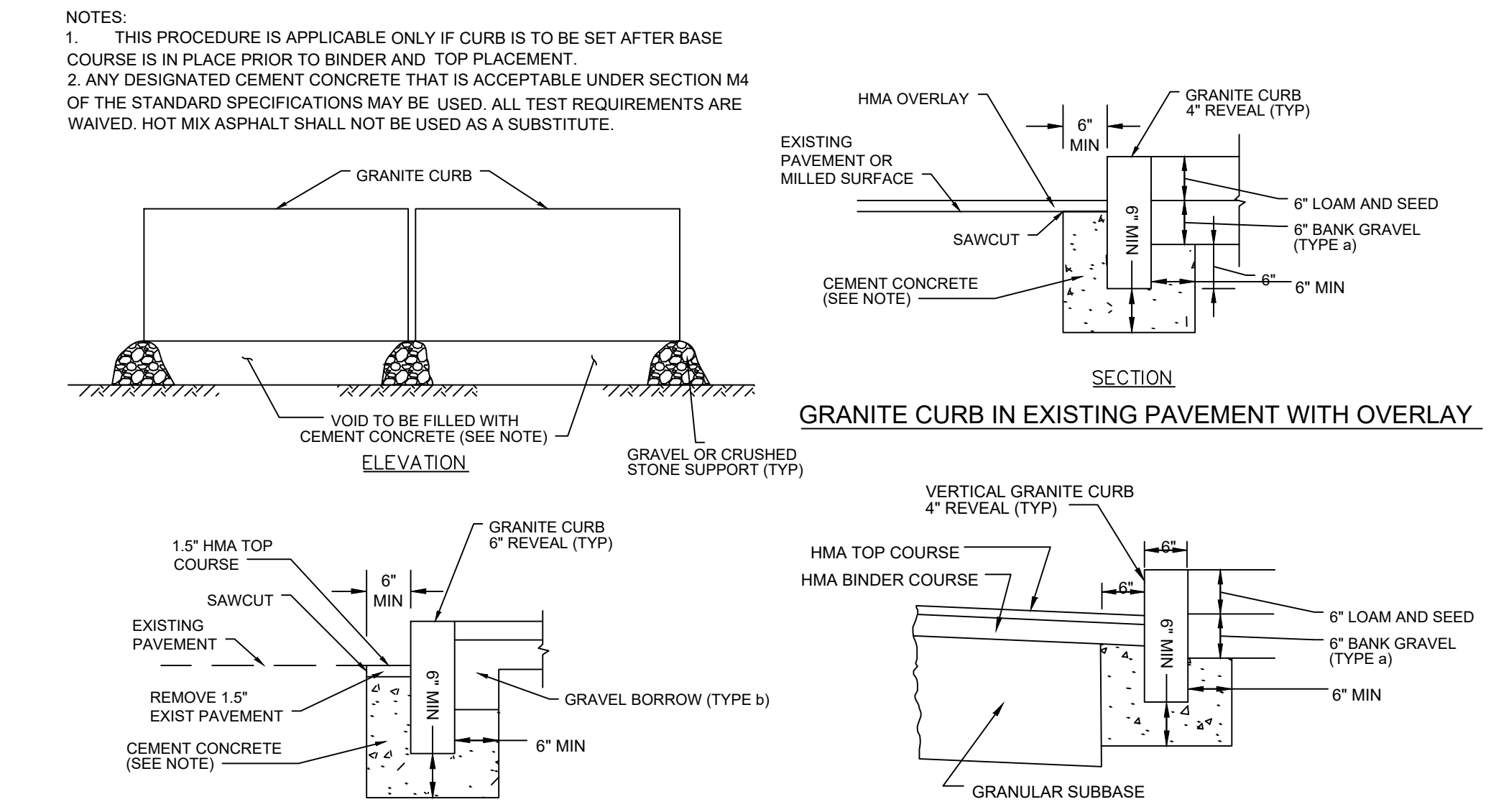
- CONSTRUCTION NOTES FOR FABRICATED SILT FENCE**
1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
 2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID-SECTION.
 3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY 6" AND FOLDED.
 4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.
 5. WHEN SILT FENCE IS USED WITH COMPOST SOCK, THE SILT FENCE IS INSTALLED AND THE COMPOST SOCK THEN PLACED AND STAKED ON THE PROJECT SIDE OF THE SILT FENCE.
- POSTS:** STEEL EITHER T OR U TYPE OR 2" HARDWOOD
FENCE: WOVEN WIRE, 14-1/2 GA. 6" MAX. MESH OPENING.
FILTER CLOTH: FILTER X, MIRAFI 100X, STABILINKA T140N OR APPROVED EQUAL.
PREFABRICATED UNIT: GEOFAB, ENVIROFENCE, OR APPROVED EQUAL.

SILT FENCE DETAIL



- COMPOST FILTER TUBE SHOULD BE INSTALLED AS PER MANUFACTURERS RECOMMENDATIONS AND WHERE SHOWN ON THE PLAN.**
- NOTES:**
1. ALL MATERIALS TO MEET SPECIFICATION.
 2. SILT SOCK COMPOST/SOL/ROCK/SEED FILL TO MEET APPLICATION REQUIREMENTS.
 3. SILT SOCK DEPICTED IS FOR MINIMUM SLOPES. GREATER SLOPES MAY REQUIRE LARGER SOCKS PER THE ENGINEER.
 4. COMPOST MATERIAL TO BE DISPERSED ON SITE AS DETERMINED BY ENGINEER.

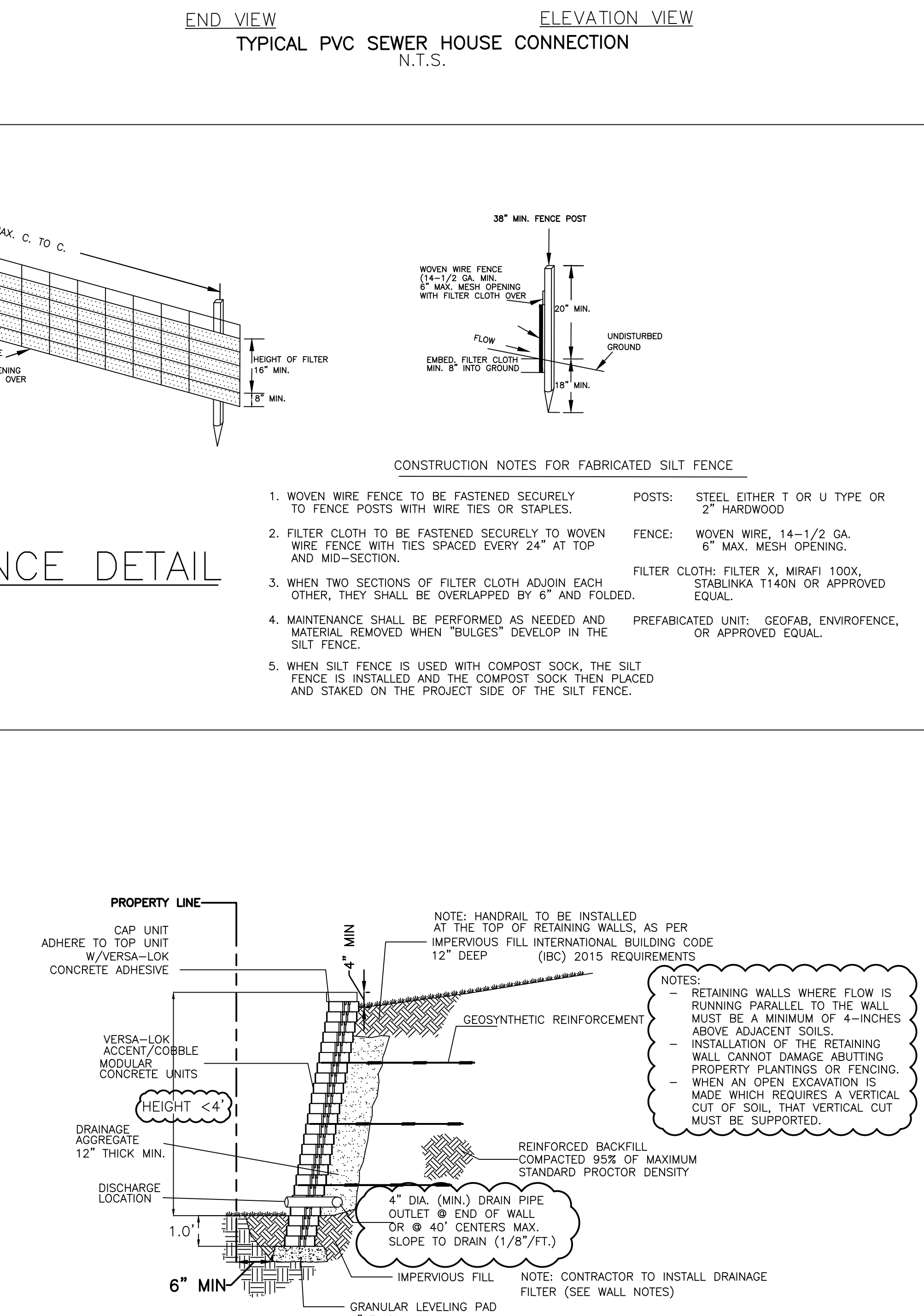
COMPOST SOCK DETAIL



GRANITE CURB IN EXISTING PAVEMENT

GRANITE CURB IN FULL DEPTH PAVEMENT

VERTICAL CURB



- NOTES:**
- RETAINING WALLS WHERE FLOW IS RUNNING PARALLEL TO THE WALL MUST BE A MINIMUM OF 4-INCHES ABOVE ADJACENT SOILS.
 - INSTALLATION OF THE RETAINING WALL CANNOT DAMAGE ABUTTING PROPERTY PLANTINGS OR FENCING.
 - WHEN AN OPEN EXCAVATION IS MADE WHICH REQUIRES A VERTICAL CUT OF SOIL, THAT VERTICAL CUT MUST BE SUPPORTED.
- NOTE: HANDRAIL TO BE INSTALLED AT THE TOP OF RETAINING WALLS, AS PER IMPERVIOUS FILL INTERNATIONAL BUILDING CODE 12" DEEP (IBC) 2015 REQUIREMENTS**
- NOTE: CONTRACTOR TO INSTALL DRAINAGE FILTER (SEE WALL NOTES)**

TYPICAL SECTION-REINFORCED RETAINING WALL
N.T.S.



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712
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NEWTON
MASSACHUSETTS

CIVIL PLAN

REVISION BLOCK

DESCRIPTION	DATE

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09/11/24

DATE:	09/03/2024
DRAWN BY:	O.G
CHECKED BY:	C.C
APPROVED BY:	F.S

DETAILS



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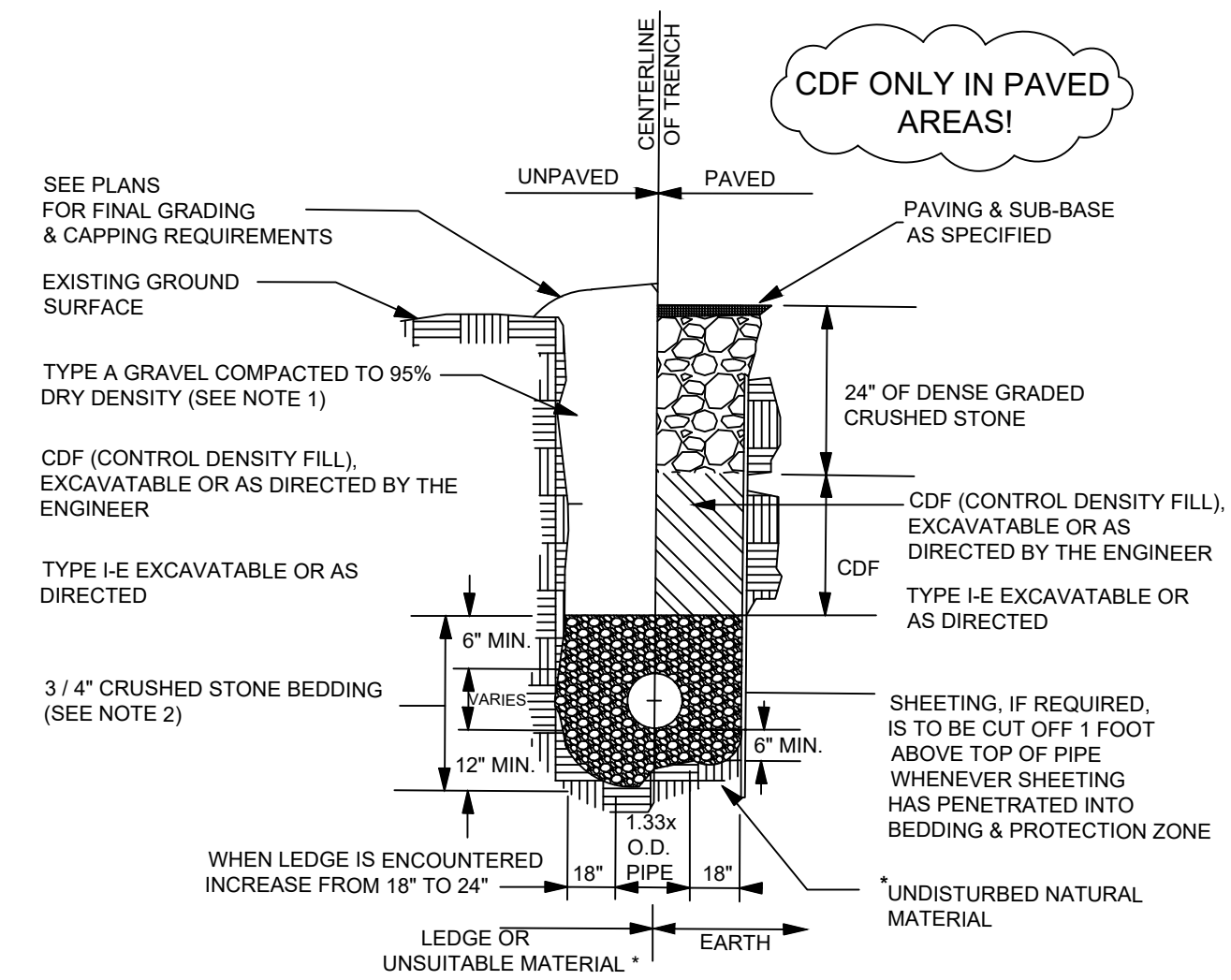


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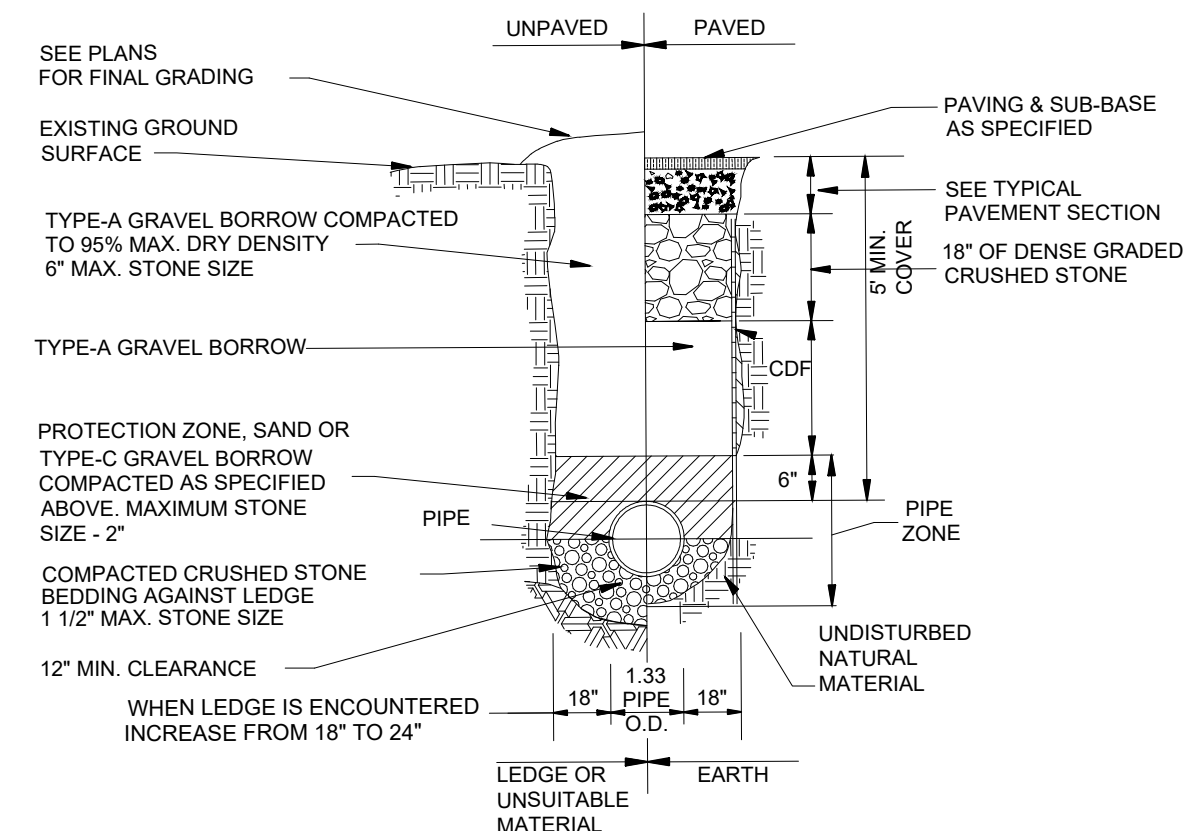
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DETAILS

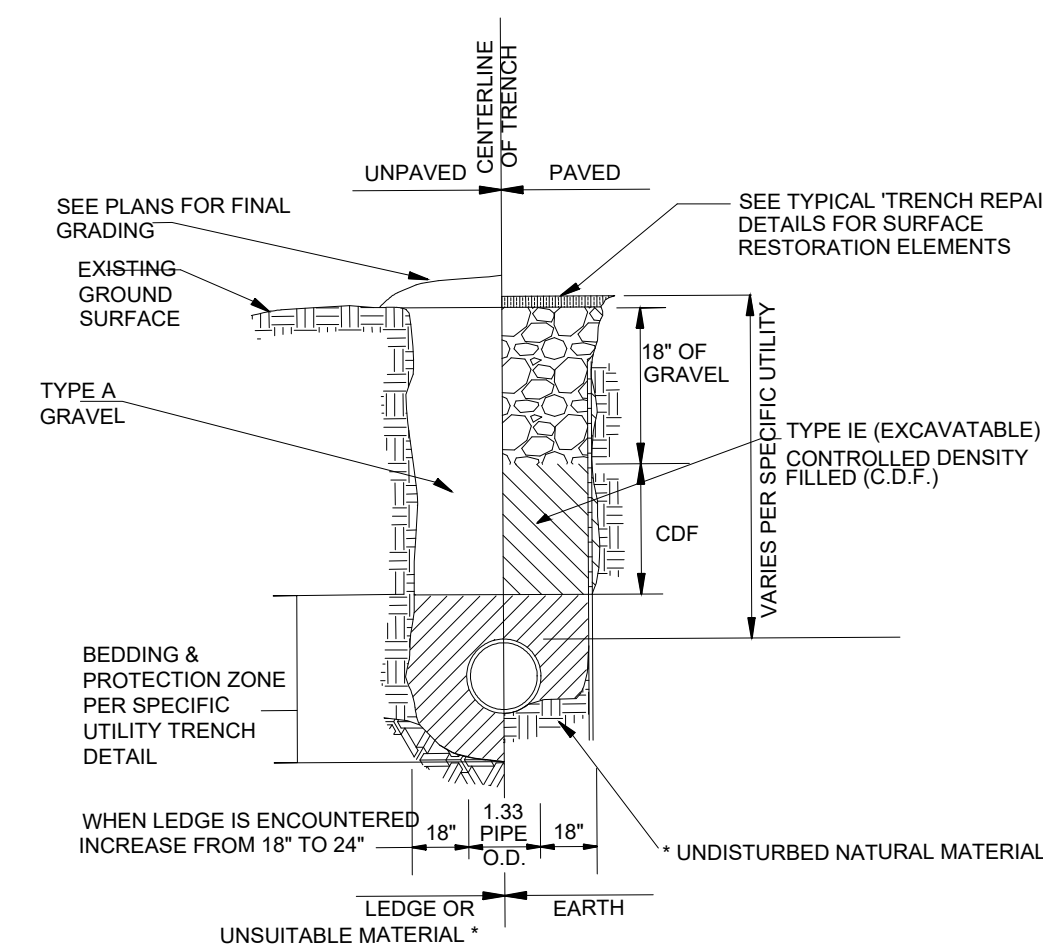
SHEET 6 OF 6



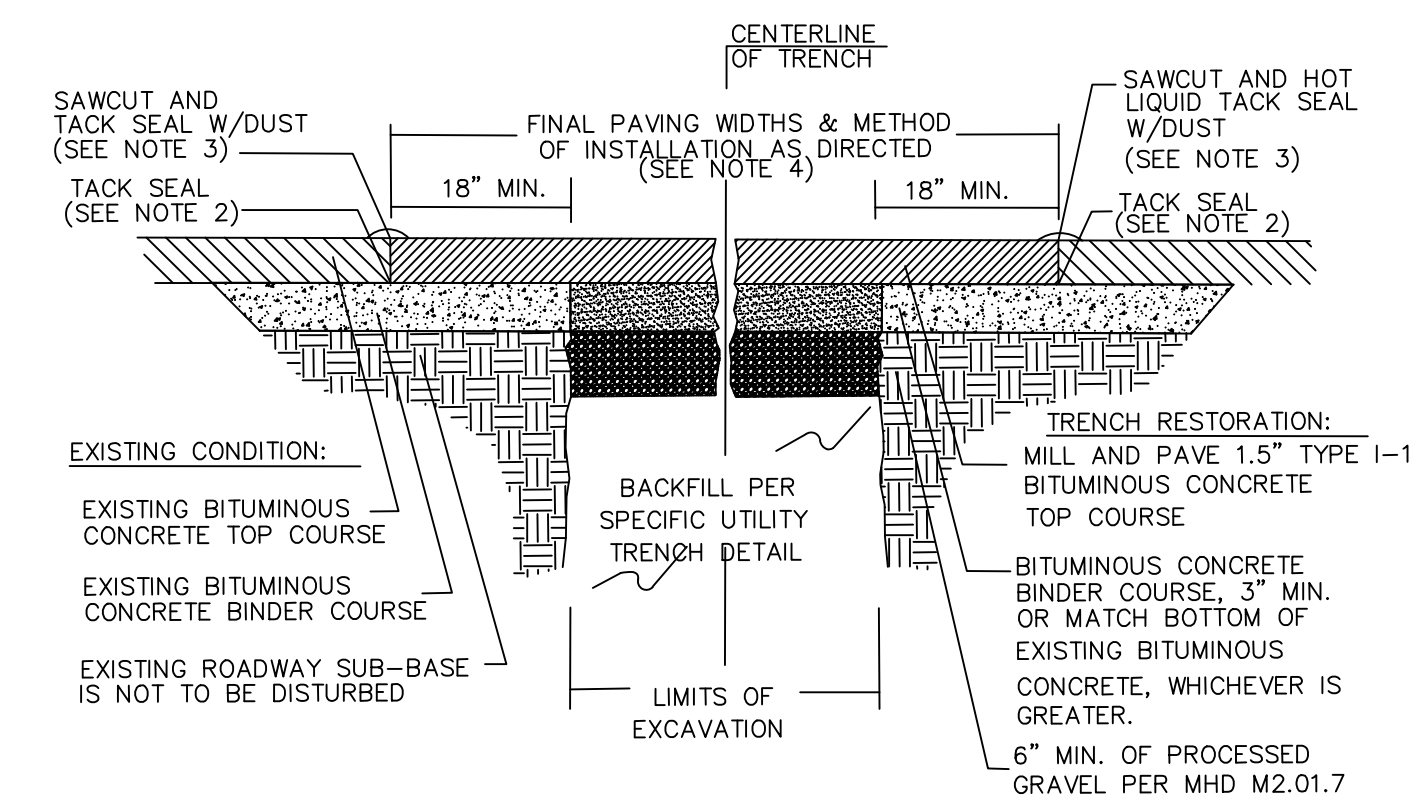
GRAVITY SEWER TRENCH DETAIL
N.T.S.



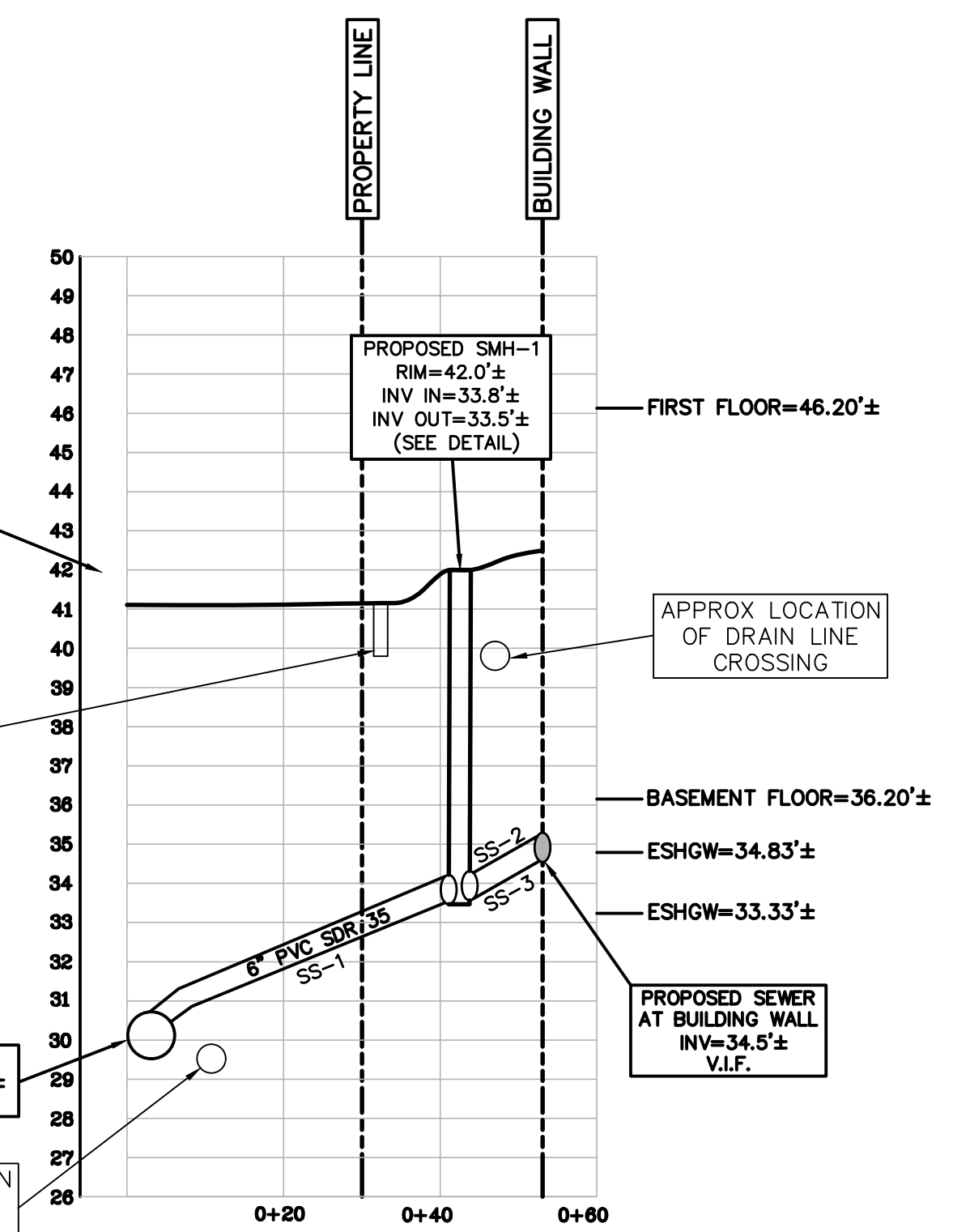
TYPICAL WATER TRENCH DETAIL
N.T.S.



TYPICAL C.D.F. (CONTROL DENSITY FILL) TRENCH SECTION
N.T.S.



TYPICAL TRENCH REPAIR & PAVEMENT SECTION DETAIL
N.T.S.



PROPOSED SEWER PROFILE

V SCALE = 1"=4'
H SCALE = 1"=20'

PROPOSED SEWER MANHOLES

SMH	RIM	INV. IN	INV. OUT
SMH-1	42.0	33.8	33.5

PROPOSED SEWER LINES

LINE	MATERIAL	SIZE	LENGTH	INV. 1	INV. 2	SLOPE
SS-1	PVC-SDR35	6"	43.5	33.50	30.75	6.32%
SS-2	PVC-SDR35	6"	11.2	34.50	33.80	6.28%
SS-3	PVC-SDR35	6"	10.4	34.50	33.80	6.73%

NOTE:
1. IF WATER AND SEWER LINES MUST CROSS OR ARE WITHIN 10-FOOT HORIZONTALLY, THE SEWER PIPE AND WATER PIPE MUST BE ENCASED. THIS REQUIREMENT STANDS UNLESS THE WATER IS A MINIMUM OF 18-INCHES ABOVE THE SEWER PIPE OR IF THERE IS A MINIMUM OF A 10-FOOT HORIZONTAL SEPARATION.
2. SEWER/DRAIN PIPES MUST BE ENCASED IN CONCRETE WHERE GROUND COVER IS LESS THAN 3 FT.