

NOTICE OF INTENT APPLICATION

TOLL BROTHERS, INC. FOR PROPOSED RESIDENTIAL DEVELOPMENT

LOCATION OF SITE:
528 BOYLSTON STREET, CITY OF NEWTON
MIDDLESEX COUNTY, MA

REFERENCES

BOUNDARY & TOPOGRAPHIC SURVEY:
RJ O'CONNELL & ASSOCIATES, INC.
80 MONTVALE AVENUE, SUITE 201
STONEHAM, MA 02150
DATE: 10/25/2021

ARCHITECTURAL PLAN:
THE ARCHITECTURAL TEAM
50 COMMANDANTS WAY
CHELSEA, MA 02150
DATE: 8/21/2023

*THE ABOVE REFERENCED DOCUMENTS ARE INCORPORATED BY REFERENCE AS PART OF THESE PLANS. HOWEVER, BOHLER ENGINEERING DOES NOT CERTIFY THE ACCURACY OF THE WORK REFERENCED OR DERIVED FROM THESE DOCUMENTS, BY OTHERS.



REVISIONS

REV	DATE	COMMENT	CHECKED BY	DRAWN BY
1	8/21/2023	REVISED BUILDING DESIGN	ACL	TAH
2	12/21/2023	RESPONSE TO COMMENTS	ACL	TAH
3	02/12/2024	RESPONSE TO COMMENTS	ACL	TAH
4	04/01/2024	RESPONSE TO COMMENTS	ACL	TAH
5	07/18/2024	RESPONSE TO COMMENTS	ACL	TAH
6	11/08/2024	RESPONSE TO COMMENTS	ACL	TAH



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PERMIT SET

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PROJECT No.: MAB220089.00
DRAWN BY: ACL
CHECKED BY: TAH
DATE: 03/10/2023
CAD ID: MAB220089.00-SPPD-5A

PROJECT:

NOTICE OF INTENT APPLICATION

FOR
TOLL BROTHERS, INC

PROPOSED RESIDENTIAL DEVELOPMENT
528 BOYLSTON STREET
CITY OF NEWTON
MIDDLESEX COUNTY, MA



45 FRANKLIN STREET, 5th FLOOR
BOSTON, MA 02110
Phone: (617) 849-8040

www.BohlerEngineering.com

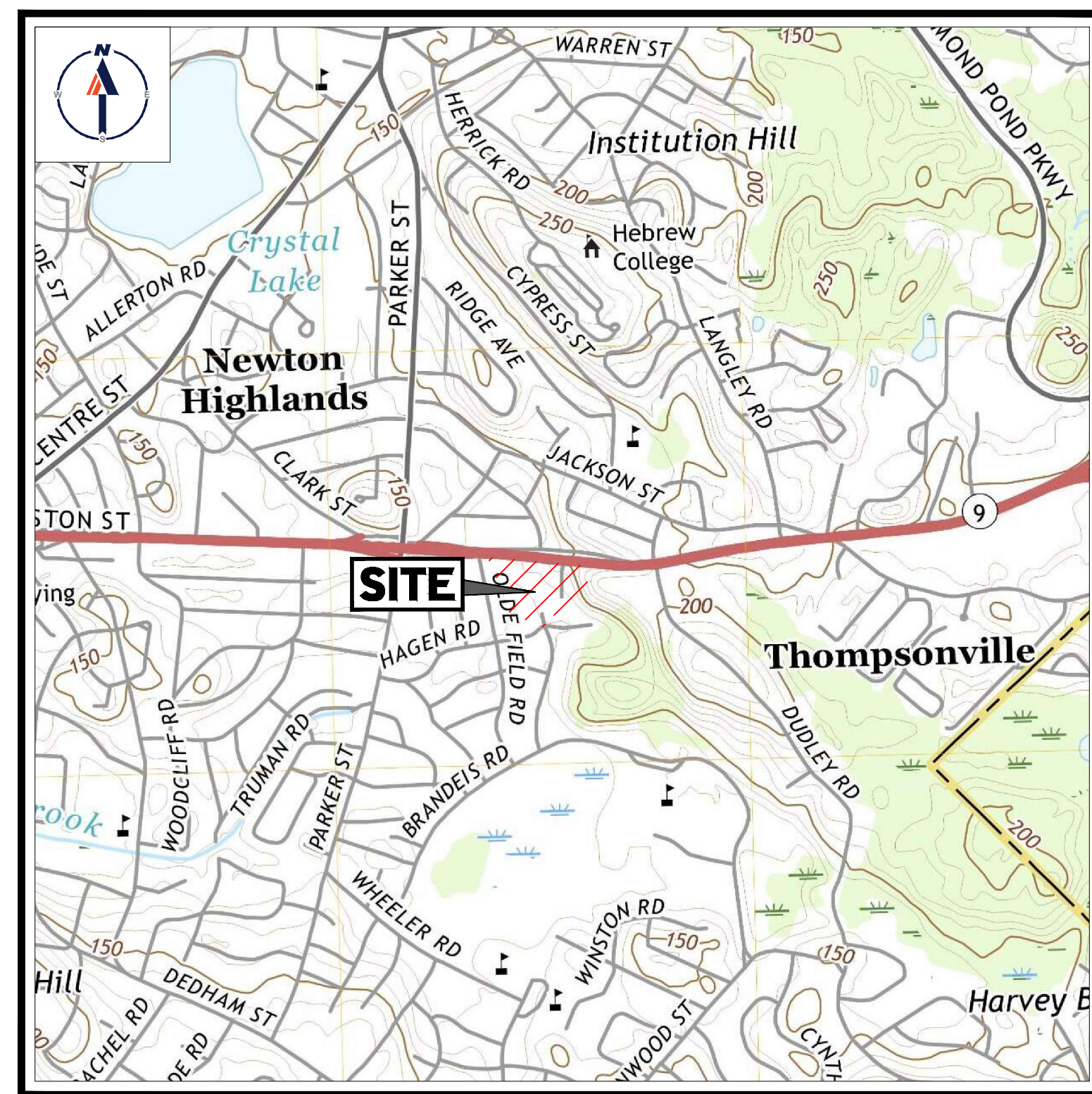


SHEET TITLE:

COVER SHEET

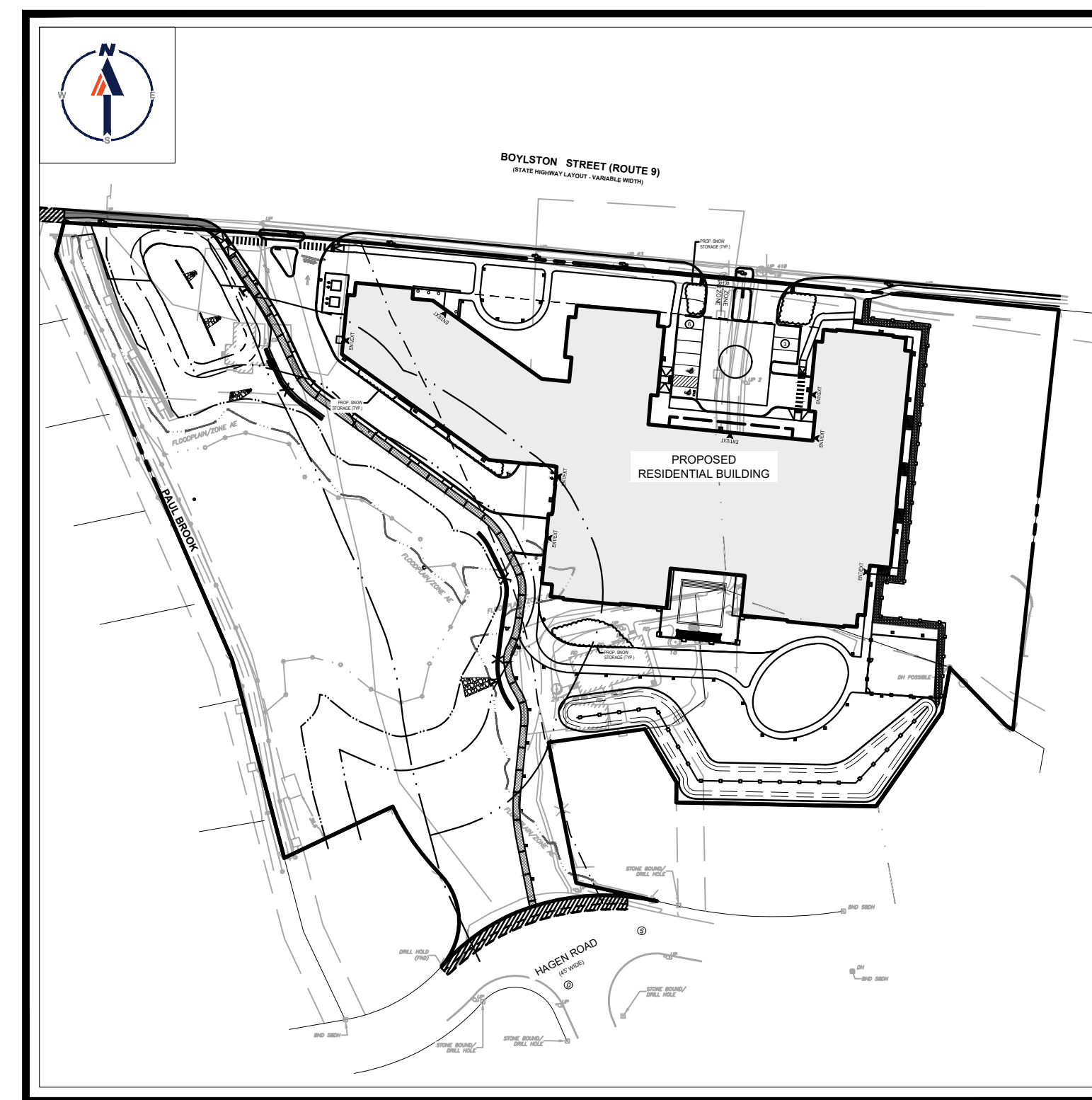
SHEET NUMBER:
C-101

REVISION 6 - 11/08/2024



USGS MAP

SCALE: 1" = 1,000'
SOURCE: USGS NEWTON 2021



SITE MAP

SCALE: 1" = 100'

DRAWING SHEET INDEX

SHEET TITLE	SHEET NUMBER
COVER SHEET	C-101
GENERAL NOTES SHEET	C-102
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DRAINAGE PLAN	C-402
UTILITY PLAN	C-501
SOIL EROSION & SEDIMENT CONTROL PLAN	C-601
SOIL EROSION & SEDIMENT CONTROL NOTES & DETAILS	C-602
DETAIL SHEET	C-701
DETAIL SHEET	C-702
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DETAIL SHEET	C-705
LANDSCAPE LAYOUT PLAN	L-100
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LANDSCAPE NOTES & DETAILS	L-600
LANDSCAPE DETAILS	L-601
LANDSCAPE DETAILS	L-602
ALTA SURVEY (BY OTHERS)	1 SHEET

PREPARED BY





RESIDENTIAL PARKING REQUIREMENTS

DIMENSIONAL REQUIREMENTS	REQUIREMENTS
BI-CYCLE PARKING STALL	7 FT X 2 FT
PARKING STALL	9 FT X 19 FT (ANGLED), 9 FT X 21 FT (PARALLEL)
ONE-WAY TRAFFIC AISLE WIDTH	12 FT (PARALLEL 30°), 14 FT (45°), 19 FT (60°), 24 FT (90°)
TWO-WAY TRAFFIC AISLE WIDTH	20 FT, OR REQUIRED ONE-WAY TRAFFIC WIDTH (WHICHEVER IS GREATER)
PARKING STALL LOCATION	NO PARKING STALL SHALL BE LOCATED WITHIN ANY REQUIRED SETBACK DISTANCES FROM A STREET AND SIDE LOT LINES, AND SHALL IN ANY CASE BE SET BACK A MINIMUM OF 5 FEET FROM THE STREET
NO OUTDOOR PARKING	NO OUTDOOR PARKING SHALL BE LOCATED WITHIN 5 FEET OF A BUILDING OR STRUCTURE CONTAINING DWELLING UNITS
BI-CYCLE SPACE PER 10 PARKING SPACES	NO MORE THAN 30 BI-CYCLE SPACES REQUIRED
RESIDENTIAL BUILDING GARAGE SPACES	222 STANDARD, 5 ADA SPACES
SURFACE PARKING SPACES	7 STANDARD, 2 ADA SPACES
TOTAL PROPOSED VEHICLE PARKING	TOTAL PARKING = 229 STANDARD, 7 ADA = 236 SPACES

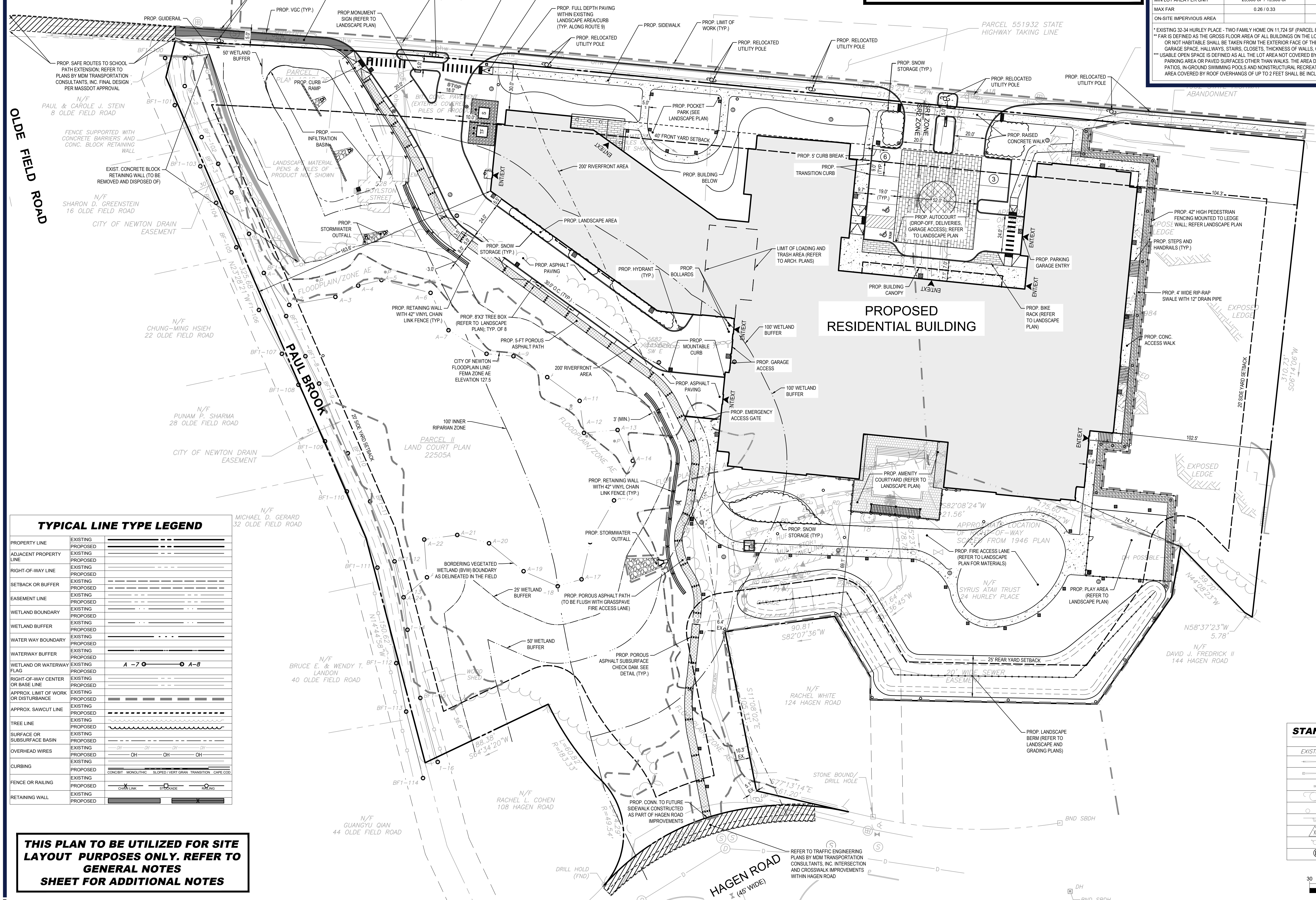
ZONING ANALYSIS TABLE

ZONING DISTRICT	SR1 / SR2	FLOODPLAIN OVERLAY DISTRICT	REQUIRED PERMIT	40B PEL APPLICATION
OVERLAY DISTRICT				
ZONE CRITERIA	REQUIRED	EXISTING	PROPOSED	
MIN. LOT AREA	25,000 SF / 15,000 SF	253,422 SF	NO CHANGE	
MIN. LOT FRONTAGE	140 FT / 100 FT	734 FT	NO CHANGE	
MAX. LOT COVERAGE	15% / 20%	3.2%	42.0% (W)	
MIN. FRONT SETBACK	40 FT / 30 FT	66.2 FT	≥30 FT (W)	
MIN. SIDE SETBACK	20 FT / 15 FT	N/A / 14.3 FT	≥102.5 FT	
MIN. REAR SETBACK	25 FT / 15 FT	N/A / 21.5 FT	≥69.1 FT	
MAX. BUILDING HEIGHT	36 FT / 5 STORIES (SLOPED)	25 FT	70 FT (6 STORIES) (W)	
OPEN SPACE	70% / 65%	90%	68.0% (W)**	
MIN. LOT AREA PER UNIT	25,000 SF / 15,000 SF	5,862 SF*	1,377 SF (W)	
MAX. FAR	0.26 / 0.33	0.35*	1.43 (W)**	
ON-SITE IMPERVIOUS AREA		30,366 SF	90,117 SF	

* EXISTING 32-34 HURLEY PLACE - TWO FAMILY HOME ON 11,724 SF (PARCEL 810510089), 4.115 GSF
 ** FAR IS DEFINED AS THE GROSS FLOOR AREA OF ALL BUILDINGS ON THE LOT (INCLUDING ALL PRINCIPAL AND ACCESSORY BUILDINGS WHETHER OR NOT HABITABLE SHALL BE TAKEN FROM THE EXTERIOR WALLS OF EACH BUILDING WITHOUT DEDUCTION FOR GARAGE SPACE, HALLWAYS, STAIRS, CLOSETS, THICKNESS OF WALLS, COLUMNS, ATRIA, OPEN WELLS AND OTHER VERTICAL OPEN SPACES
 *** USABLE OPEN SPACE IS DEFINED AS ALL THE LOT AREA NOT COVERED BY BUILDINGS AND/OR STRUCTURES, ROADWAYS, DRIVES, SURFACE PARKING AREA OR PAVED SURFACES OTHER THAN WALKS. THE AREA DEVOTED TO LAWNS, LANDSCAPING, EXTERIOR TENNIS COURTS, PATIOS, IN-GROUND SWIMMING POOLS AND NONSTRUCTURAL RECREATIONAL AMENITIES SHALL BE INCLUDED AS USABLE OPEN SPACE. THE AREA COVERED BY ROOF OVERHANGS OF UP TO 2 FEET SHALL BE INCLUDED IN THE CALCULATION OF OPEN SPACE.

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 SUSTAINABLE DESIGN
 PERMITTING SERVICES
 TRANSPORTATION SERVICES

BOYLSTON STREET (ROUTE 9) (STATE HIGHWAY LAYOUT - VARIABLE WIDTH)



SITE INFORMATION

- APPLICANT: TOLL BROTHERS, INC. 116 FLANDERS ROAD, SUITE 1200 WESTBOROUGH, MA 01581
- OWNER: WHITE EARLE B DANIEL T, MCGILL DONNA WHITE TRS 528 BOYLSTON STREET NEWTON, MA 02459
- PARCEL: MAP 120 SE, PARCELS 810510100, 810510101, 810510102, MAP 131NW, PARCEL 810510001C, MAP 130 SE, PARCELS 810510103, 810510089, 810510098, 502-504, 516, 528 BOYLSTON STREET, 0 HAGEN ROAD, 24-26, 32-34 HURLEY PLACE, NEWTON, MA 02459 MIDDLESEX COUNTY

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 Phone: (617) 849-8040
www.BohlerEngineering.com

PROFESSIONAL ENGINEER
 TIMOTHY A. HAYES
 NO. 51929
 STATE OF MASSACHUSETTS

SHEET TITLE:

SITE LAYOUT PLAN

SHEET NUMBER:

C-301

REVISION 6 - 11/08/2024

TYPICAL LINE TYPE LEGEND

PROPERTY LINE	EXISTING	PROPOSED
ADJACENT PROPERTY LINE <td>---</td> <td>---</td>	---	---
RIGHT-OF-WAY LINE <td>---</td> <td>---</td>	---	---
SETBACK OR BUFFER <td>---</td> <td>---</td>	---	---
EASEMENT LINE <td>---</td> <td>---</td>	---	---
WETLAND BOUNDARY <td>---</td> <td>---</td>	---	---
WETLAND BUFFER <td>---</td> <td>---</td>	---	---
WATER WAY BOUNDARY <td>---</td> <td>---</td>	---	---
WATER WAY BUFFER <td>---</td> <td>---</td>	---	---
WETLAND OR WATERWAY FLAG <td>---</td> <td>---</td>	---	---
RIGHT-OF-WAY CENTER OR BASE LINE <td>---</td> <td>---</td>	---	---
APPROX. LIMIT OF WORK OR DISTURBANCE <td>---</td> <td>---</td>	---	---
APPROX. SAWCUT LINE <td>---</td> <td>---</td>	---	---
TREE LINE <td>---</td> <td>---</td>	---	---
SURFACE OR SUBSURFACE BASIN <td>---</td> <td>---</td>	---	---
OVERHEAD WIRES <td>---</td> <td>---</td>	---	---
CURBING <td>---</td> <td>---</td>	---	---
FENCE OR RAILING <td>---</td> <td>---</td>	---	---
RETAINING WALL <td>---</td> <td>---</td>	---	---

ABBREVIATIONS

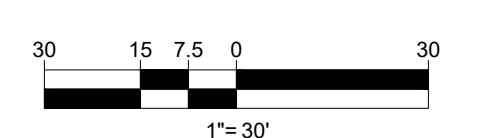
KEY	DESCRIPTION
ARCH	ARCHITECT
BM	BENCHMARK
BLDG	BUILDING
CONC	CONCRETE
DEC	DECORATIVE
DEP	DEPRESSED
EOP	EDGE OF PAVEMENT
EXIST.	EXISTING
GC	GENERAL CONTRACTOR
INT	INTERSECTION
L.S.A.	LANDSCAPE AREA
LOD	LIMIT OF DISTURBANCE
LOW	LIMIT OF WORK
MEP	MECHANICAL, ELECTRICAL, PLUMBING
MIN	MINIMUM
No. / #	NUMBER
PROP.	PROPOSED
R	RADIUS OR RADII
R.O.W.	RIGHT-OF-WAY
SF	SQUARE FOOT
STA	STATION
TBR	TO BE REMOVED
TBR/R	TO BE REMOVED AND REPLACED
TC	TOP OF CURB
TW	TOP OF WALL
TPF	TREE PROTECTION FENCE
TYP.	TYPICAL
UNG	UNDERGROUND
V.I.F.	VERIFY IN FIELD
W	WIDTH

STANDARD DRAWING LEGEND

FOR ENTIRE PLAN SET

EXISTING NOTE	TYPICAL NOTE TEXT	PROPOSED NOTE
---	UTILITY POLE WITH LIGHT	---
---	POLE LIGHT	---
---	TRAFFIC LIGHT	---
---	UTILITY POLE	---
---	TYPICAL LIGHT	---
---	TYPICAL SIGN	---
---	PARKING COUNTS	---
---	HYDRANT	---
---	GRATE INLET	---

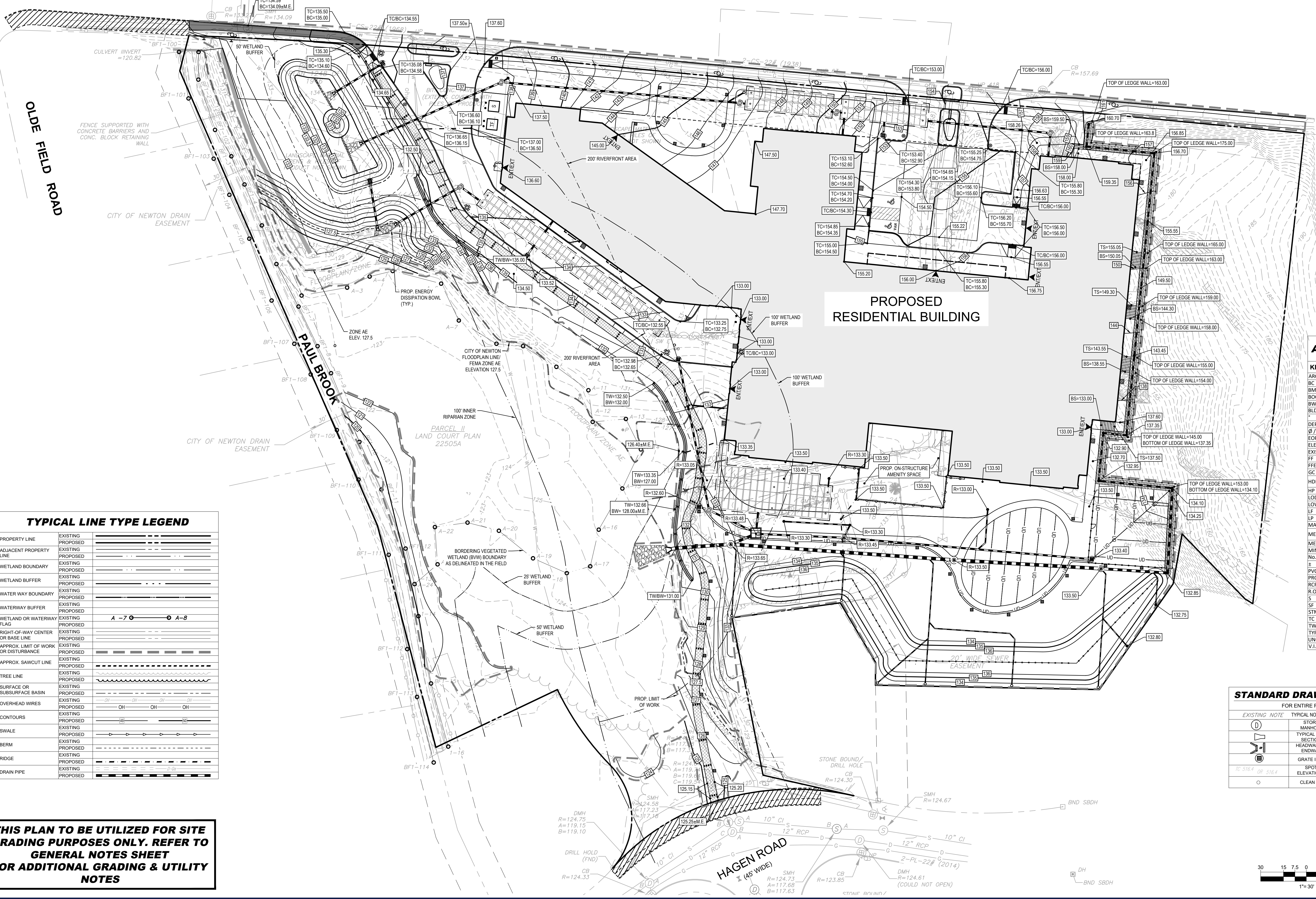
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BOYLSTON STREET (ROUTE 9)
(STATE HIGHWAY LAYOUT - VARIABLE WIDTH)



OLDE FIELD ROAD

PAUL BROOK

**PROPOSED
RESIDENTIAL BUILDING**

HAGEN ROAD
(45' WIDE)

TYPICAL LINE TYPE LEGEND

PROPERTY LINE	EXISTING	PROPOSED
ADJACENT PROPERTY LINE	---	---
WETLAND BOUNDARY	---	---
WETLAND BUFFER	---	---
WATER WAY BOUNDARY	---	---
WATERWAY BUFFER	---	---
WETLAND OR WATERWAY FLAG	---	---
RIGHT-OF-WAY CENTER OR BASE LINE	---	---
APPROX. LIMIT OF WORK OR DISTURBANCE	---	---
APPROX. SAWCUT LINE	---	---
TREE LINE	---	---
SURFACE OR SUBSURFACE BASIN	---	---
OVERHEAD WIRES	---	---
CONTOURS	---	---
SWALE	---	---
BERM	---	---
RIDGE	---	---
DRAIN PIPE	---	---

ABBREVIATIONS

KEY	DESCRIPTION
ARCH	ARCHITECT
BC	BACK OF CURB
BM	BENCHMARK
BOC	BOTTOM OF CURB
BW	BOTTOM OF WALL
BLDG	BUILDING
°	DEGREE
DEP	DEPRESSED
Ø / DIA	DIAMETER
EOP	EDGE OF PAVEMENT
ELEV	ELEVATION
EXIST.	EXISTING
FF	FINISH FLOOR
FFE	FINISH FLOOR ELEVATION
GC	GENERAL CONTRACTOR
HDPE	HIGH DENSITY POLYETHYLENE
HP	HIGH POINT
LOD	LIMIT OF DISTURBANCE
LOW	LIMIT OF WORK
LF	LINEAR FOOT / FEET
LP	LOW POINT
MAX	MAXIMUM
MEP	MECHANICAL, ELECTRICAL, PLUMBING
ME	MEET OR MATCH EXISTING
MIN	MINIMUM
No. / #	NUMBER
±	PLUS OR MINUS
PVC	POLYVINYL CHLORIDE PIPE
PROP.	PROPOSED
RCP	REINFORCED CONCRETE PIPE
R.O.W.	RIGHT-OF-WAY
S	SLOPE
SF	SQUARE FOOT
STM	STORM
TC	TOP OF CURB
TW	TOP OF WALL
TYP.	TYPICAL
UNG	UNDERGROUND
V.I.F.	VERIFY IN FIELD

STANDARD DRAWING LEGEND

FOR ENTIRE PLAN SET		
EXISTING NOTE	TYPICAL PLAN TEXT	PROPOSED NOTE
	STORM MANHOLE	
	TYPICAL END SECTION	
	HEADWALL OR ENDWALL	
	GRATE INLET	
	SPOT ELEVATIONS	
	CLEAN OUT	

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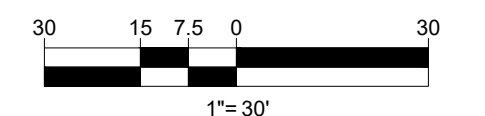
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COMMONWEALTH OF MASSACHUSETTS
TIMOTHY A. HAYES
NO. 51929
REGISTERED PROFESSIONAL ENGINEER

SHEET TITLE:
GRADING PLAN
SHEET NUMBER:
C-401
REVISION 6 - 11/08/2024

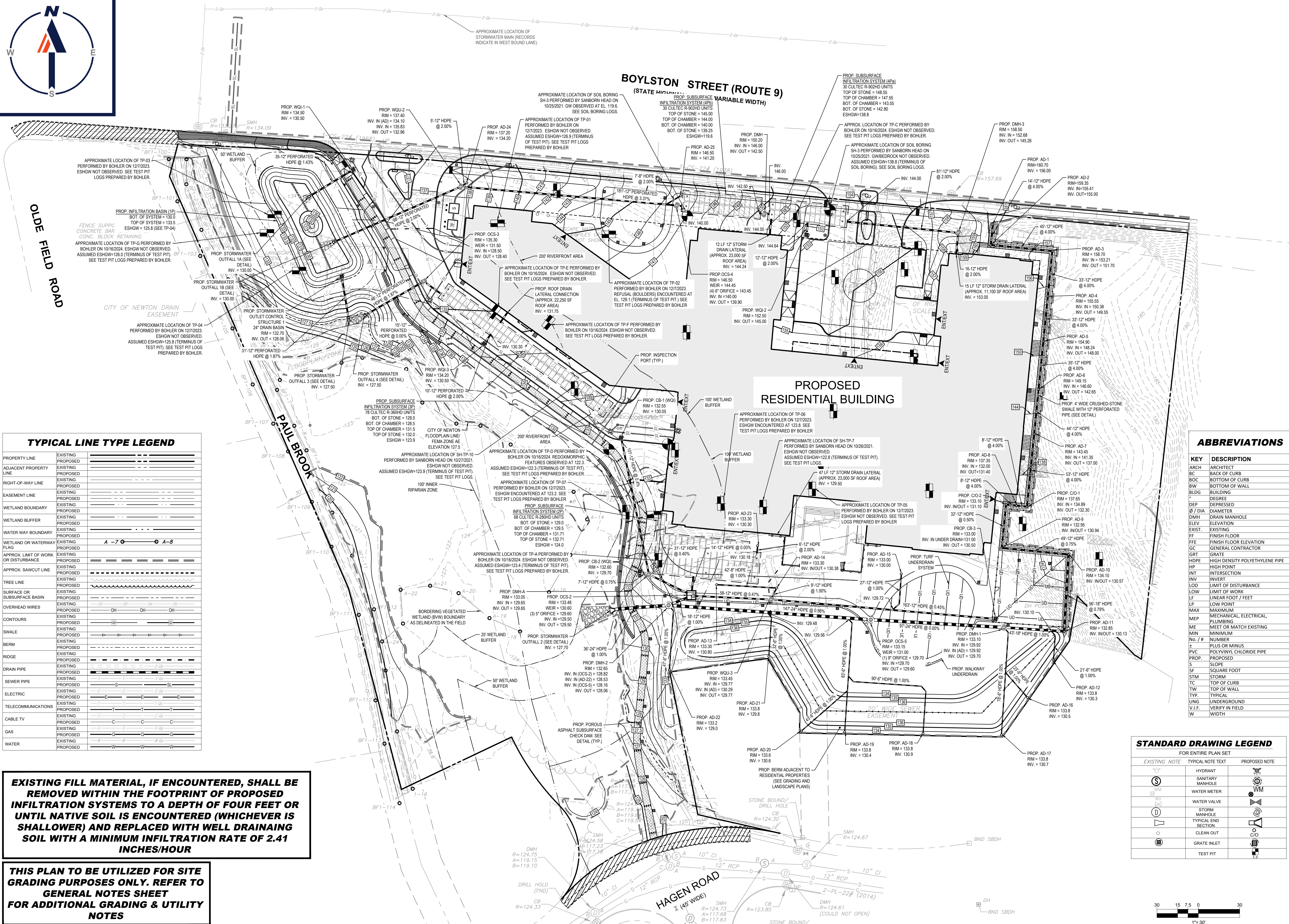


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OLDE FIELD ROAD

BOYLSTON STREET (ROUTE 9) (STATE HIGHWAY VARIABLE WIDTH)



TYPICAL LINE TYPE LEGEND

PROPERTY LINE	EXISTING	-----
PROPERTY LINE	PROPOSED	-----
ADJACENT PROPERTY LINE	EXISTING	-----
ADJACENT PROPERTY LINE	PROPOSED	-----
RIGHT-OF-WAY LINE	EXISTING	-----
RIGHT-OF-WAY LINE	PROPOSED	-----
EASEMENT LINE	EXISTING	-----
EASEMENT LINE	PROPOSED	-----
WETLAND BOUNDARY	EXISTING	-----
WETLAND BOUNDARY	PROPOSED	-----
WATER WAY BOUNDARY	EXISTING	-----
WATER WAY BOUNDARY	PROPOSED	-----
WETLAND OR WATERWAY FLAG	EXISTING	A-7
WETLAND OR WATERWAY FLAG	PROPOSED	A-8
APPROX. LIMIT OF WORK OR DISTURBANCE	EXISTING	-----
APPROX. LIMIT OF WORK OR DISTURBANCE	PROPOSED	-----
APPROX. SAWCUT LINE	EXISTING	-----
APPROX. SAWCUT LINE	PROPOSED	-----
TREE LINE	EXISTING	-----
TREE LINE	PROPOSED	-----
SURFACE OR SUBSURFACE BASIN	EXISTING	-----
SURFACE OR SUBSURFACE BASIN	PROPOSED	-----
OVERHEAD WIRES	EXISTING	-----
OVERHEAD WIRES	PROPOSED	-----
CONTOURS	EXISTING	-----
CONTOURS	PROPOSED	-----
SWALE	EXISTING	-----
SWALE	PROPOSED	-----
BERM	EXISTING	-----
BERM	PROPOSED	-----
RIDGE	EXISTING	-----
RIDGE	PROPOSED	-----
DRAIN PIPE	EXISTING	-----
DRAIN PIPE	PROPOSED	-----
SEWER PIPE	EXISTING	-----
SEWER PIPE	PROPOSED	-----
ELECTRIC	EXISTING	-----
ELECTRIC	PROPOSED	-----
TELECOMMUNICATIONS	EXISTING	-----
TELECOMMUNICATIONS	PROPOSED	-----
CABLE TV	EXISTING	-----
CABLE TV	PROPOSED	-----
GAS	EXISTING	-----
GAS	PROPOSED	-----
WATER	EXISTING	-----
WATER	PROPOSED	-----

ABBREVIATIONS

KEY	DESCRIPTION
ARCH	ARCHITECT
BC	BACK OF CURB
BCC	BOTTOM OF CURB
BN	BOTTOM OF WALL
BLDG	BUILDING
DEP	DEPRESSED
Ø / DIA	DIAMETER
DMH	DRAIN MANHOLE
ELEV	ELEVATION
EXIST.	EXISTING
FF	FINISH FLOOR
FFE	FINISH FLOOR ELEVATION
GC	GENERAL CONTRACTOR
GR	GRATE
HDPE	HIGH DENSITY POLYETHYLENE PIPE
HP	HIGH POINT
INT	INTERSECTION
INV	INVERT
LOD	LIMIT OF DISTURBANCE
LOW	LIMIT OF WORK
LF	LINEAR FOOT / FEET
LX	LOW POINT
MAP	MAXIMUM
MEP	MECHANICAL, ELECTRICAL, PLUMBING
ME	MEET OR MATCH EXISTING
MIN	MINIMUM
No. #	NUMBER
+ / -	PLUS OR MINUS
PVC	POLYVINYL CHLORIDE PIPE
PROP.	PROPOSED
S	SLOPE
SF	SQUARE FOOT
STM	STORM
TC	TOP OF CURB
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TYP.	TYPICAL
UNG	UNDERGROUND
V.I.F.	VERIFY IN FIELD
W	WIDTH

STANDARD DRAWING LEGEND

FOR ENTIRE PLAN SET

EXISTING NOTE	TYPICAL NOTE TEXT	PROPOSED NOTE
⊕	HYDRANT	⊕
⊕	SANITARY MANHOLE	⊕
⊕	WATER METER	⊕
⊕	WATER VALVE	⊕
⊕	STORM MANHOLE	⊕
⊕	TYPICAL END SECTION	⊕
⊕	CLEAN OUT	⊕
⊕	GRATE INLET	⊕
⊕	TEST PIT	⊕

EXISTING FILL MATERIAL, IF ENCOUNTERED, SHALL BE REMOVED WITHIN THE FOOTPRINT OF PROPOSED INFILTRATION SYSTEMS TO A DEPTH OF FOUR FEET OR UNTIL NATIVE SOIL IS ENCOUNTERED (WHICHEVER IS SHALLOWER) AND REPLACED WITH WELL DRAINING SOIL WITH A MINIMUM INFILTRATION RATE OF 2.41 INCHES/HOUR

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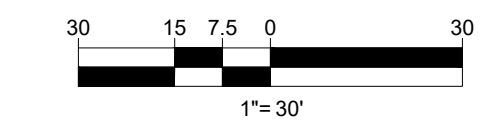
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SHEET TITLE: DRAINAGE PLAN

SHEET NUMBER: **C-402**

REVISION 6 - 11/08/2024



C:\PROGRAMDATA\BOHLER\32022\NETM\PA\PI\PUB\ENH_18448\MAB220089.00-SPPD-5A.dwg - LAYOUT: C-402.DRAIN



BOYLSTON STREET (ROUTE 9) (STATE HIGHWAY LAYOUT - VARIABLE WIDTH)

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3	02/12/2024	RESPONSE TO COMMENTS	ACL	TAH
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5	07/18/2024	RESPONSE TO COMMENTS	ACL	TAH
6	11/08/2024	RESPONSE TO COMMENTS	ACL	TAH

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PROJECT No.:	MAB220089.00
DRAWN BY:	ACL
CHECKED BY:	TAH
DATE:	03/10/2023
CAD ID.:	MAB220089.00-SPPD-5A

NOTICE OF INTENT APPLICATION FOR

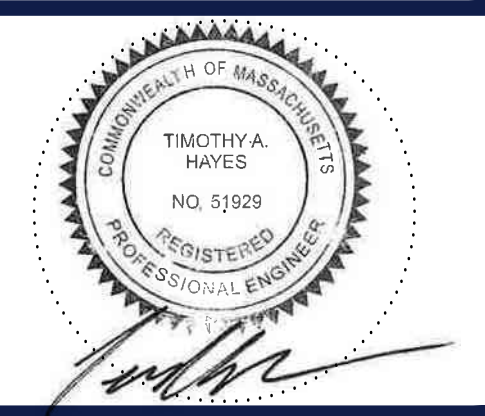
TOLL BROTHERS, INC

PROPOSED RESIDENTIAL DEVELOPMENT
528 BOYLSTON STREET
CITY OF NEWTON
MIDDLESEX COUNTY, MA

BOHLER

45 FRANKLIN STREET, 5th FLOOR
BOSTON, MA 02110
Phone: (617) 849-8040

www.BohlerEngineering.com



SHEET TITLE:

UTILITY PLAN

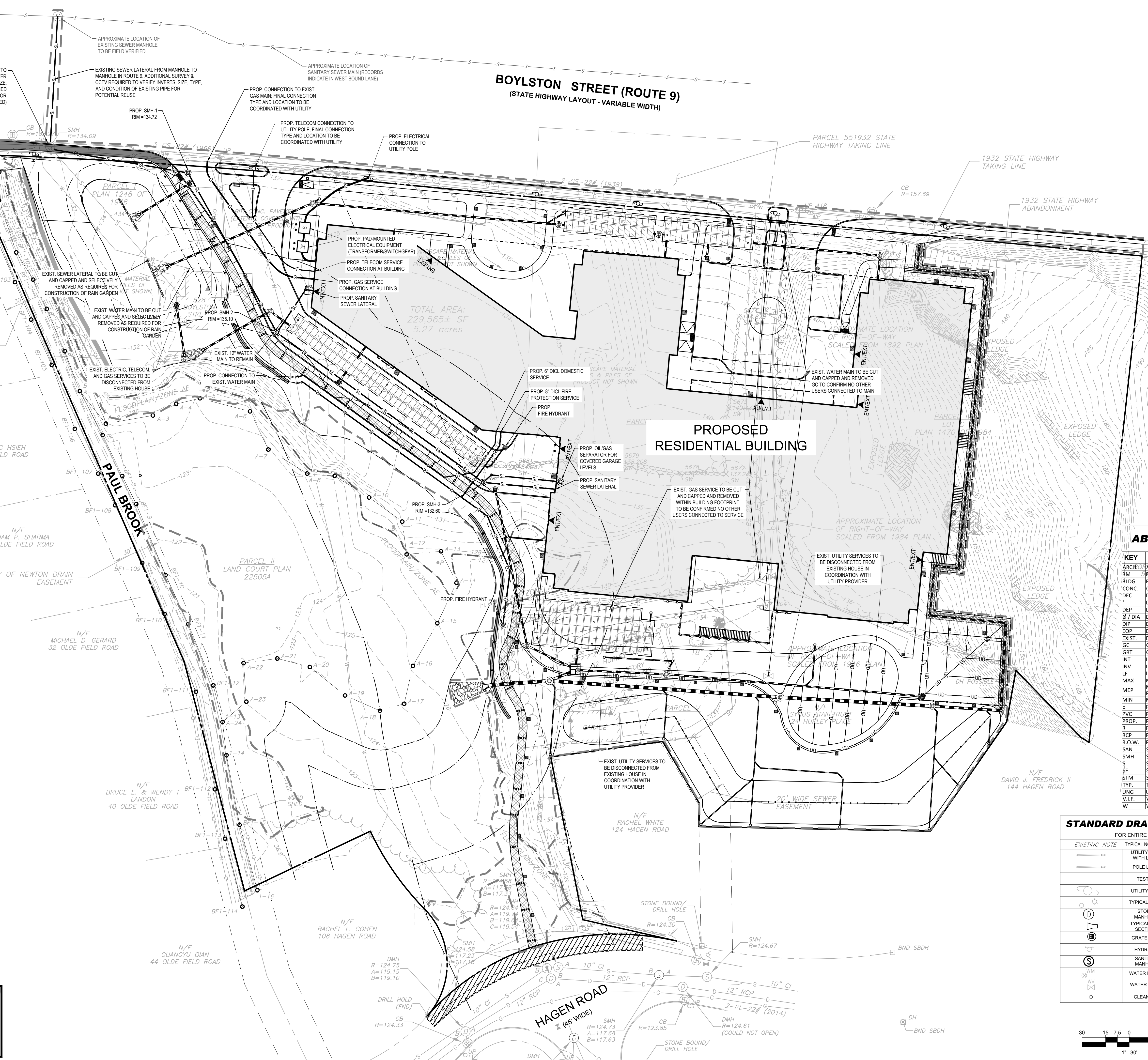
SHEET NUMBER:
C-501

REVISION 6 - 11/08/2024

TYPICAL LINE TYPE LEGEND

PROPERTY LINE	EXISTING	PROPOSED
ADJACENT PROPERTY LINE	---	---
RIGHT-OF-WAY LINE	---	---
SETBACK OR BUFFER	---	---
EASEMENT LINE	---	---
WETLAND BOUNDARY	---	---
WETLAND BUFFER	---	---
WATER WAY BOUNDARY	---	---
WATERWAY BUFFER	---	---
WETLAND OR WATERWAY FLAG	---	A-7 A-8
RIGHT-OF-WAY CENTER OR BASE LINE	---	---
APPROX. LIMIT OF WORK OR DISTURBANCE	---	---
APPROX. SAWCUT LINE	---	---
TREE LINE	---	---
SURFACE OR SUBSURFACE BASIN	---	---
OVERHEAD WIRES	OH	OH
SWALE	---	---
BERM	---	---
RIDGE	---	---
DRAIN PIPE	---	---
SEWER PIPE	---	---
ELECTRIC	---	---
TELECOMMUNICATIONS	---	---
GAS	---	---
WATER	---	---

THIS PLAN TO BE UTILIZED FOR UTILITIES PURPOSES ONLY. REFER TO GENERAL NOTES SHEET FOR ADDITIONAL GRADING & UTILITY NOTES

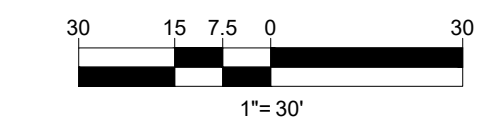


ABBREVIATIONS

KEY	DESCRIPTION
ARCH	ARCHITECT
BM	BENCHMARK
BLDG	BUILDING
CONC	CONCRETE
DEC	DECORATIVE
DEP	DEGREE
DEP	DEPRESSED
Ø / DIA	DIAMETER
DIP	DUCTILE IRON PIPE
EOP	EDGE OF PAVEMENT
EXIST.	EXISTING
GC	GENERAL CONTRACTOR
GRT	GRATE
INT	INTERSECTION
INV	INVERT
LF	LINEAR FOOT / FEET
MAX	MAXIMUM
MEP	MECHANICAL, ELECTRICAL, PLUMBING
MIN	MINIMUM
±	PLUS OR MINUS
PVC	POLYVINYL CHLORIDE PIPE
R	RADIUS OR RADI
RCP	REINFORCED CONCRETE PIPE
R.O.W.	RIGHT-OF-WAY
SAN	SANITARY
SMH	SEWER MANHOLE
S	SLOPE
SF	SQUARE FOOT
STM	STORM
TYP	TYPICAL
UNG	UNDERGROUND
V.I.F.	VERIFY IN FIELD
W	WIDTH

STANDARD DRAWING LEGEND

FOR ENTIRE PLAN SET		
EXISTING NOTE	TYPICAL NOTE TEXT	PROPOSED NOTE
	UTILITY POLE WITH LIGHT	
	POLE LIGHT	
	TEST PIT	
	UTILITY POLE	
	TYPICAL LIGHT	
	STORM MANHOLE	
	TYPICAL END SECTION	
	GRATE INLET	
	HYDRANT	
	SANITARY MANHOLE	
	WATER METER	
	WATER VALVE	
	CLEAN OUT	



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BOYLSTON STREET (ROUTE 9)
(STATE HIGHWAY LAYOUT - VARIABLE WIDTH)



BOHLER
SITE CIVIL AND CONSULTING ENGINEERING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

REVISIONS

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PROJECT No.: MAB220089.00
DRAWN BY: ACL
DATE: 03/01/2023
CAD ID: MAB220089.00-SPPD-SA

NOTICE OF INTENT APPLICATION
FOR
TOLL BROTHERS, INC

PROPOSED RESIDENTIAL DEVELOPMENT

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CITY OF NEWTON
MIDDLESEX COUNTY, MA

BOHLER
45 FRANKLIN STREET, 5th FLOOR
BOSTON, MA 02110
Phone: (617) 849-8040
www.BohlerEngineering.com

TIMOTHY A. HAYES
NO. 51929
REGISTERED PROFESSIONAL ENGINEER

SHEET TITLE:
SOIL EROSION & SEDIMENT CONTROL PLAN

SHEET NUMBER:
C-601

REVISION 6 - 11/08/2024

ABBREVIATIONS

KEY	DESCRIPTION
ARCH	ARCHITECT
BLDG	BUILDING
Ø / DIA	DIAMETER
DMH	DRAIN MANHOLE
EXIST.	EXISTING
GC	GENERAL CONTRACTOR
GRT	GRATE
HP	HIGH POINT
INT	INTERSECTION
LOD	LIMIT OF DISTURBANCE
LOW	LIMIT OF WORK
LF	LINEAR FOOT / FEET
MIN	MINIMUM
No. #	NUMBER
±	PLUS OR MINUS
PROP.	PROPOSED
TYP.	TYPICAL
UNG	UNDERGROUND
V.I.F.	VERIFY IN FIELD
W	WIDTH

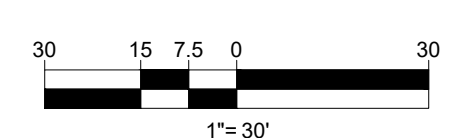
STANDARD DRAWING LEGEND

FOR ENTIRE PLAN SET

EXISTING NOTE	TYPICAL NOTE TEXT	PROPOSED NOTE
	STORM MANHOLE	
	TYPICAL END SECTION	
	GRATE INLET	
	CLEAN OUT	

THIS PLAN TO BE UTILIZED FOR SITE SOIL AND EROSION CONTROL PURPOSES ONLY

REFER TO SOIL EROSION CONTROL NOTES & DETAIL SHEET FOR EROSION NOTES AND DETAILS



SEE LA PLANS FOR ADDITIONAL EROSION CONTROL DETAILS ALONG PAUL BROOK

REFER TO SHEET L-400 FOR TREE REMOVAL WITHIN LIMIT OF WORK (TYP.)

APPROXIMATE TOTAL SITE DISTURBANCE: 178,000 SF (4.09 AC)

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EROSION AND SEDIMENT CONTROL NOTES

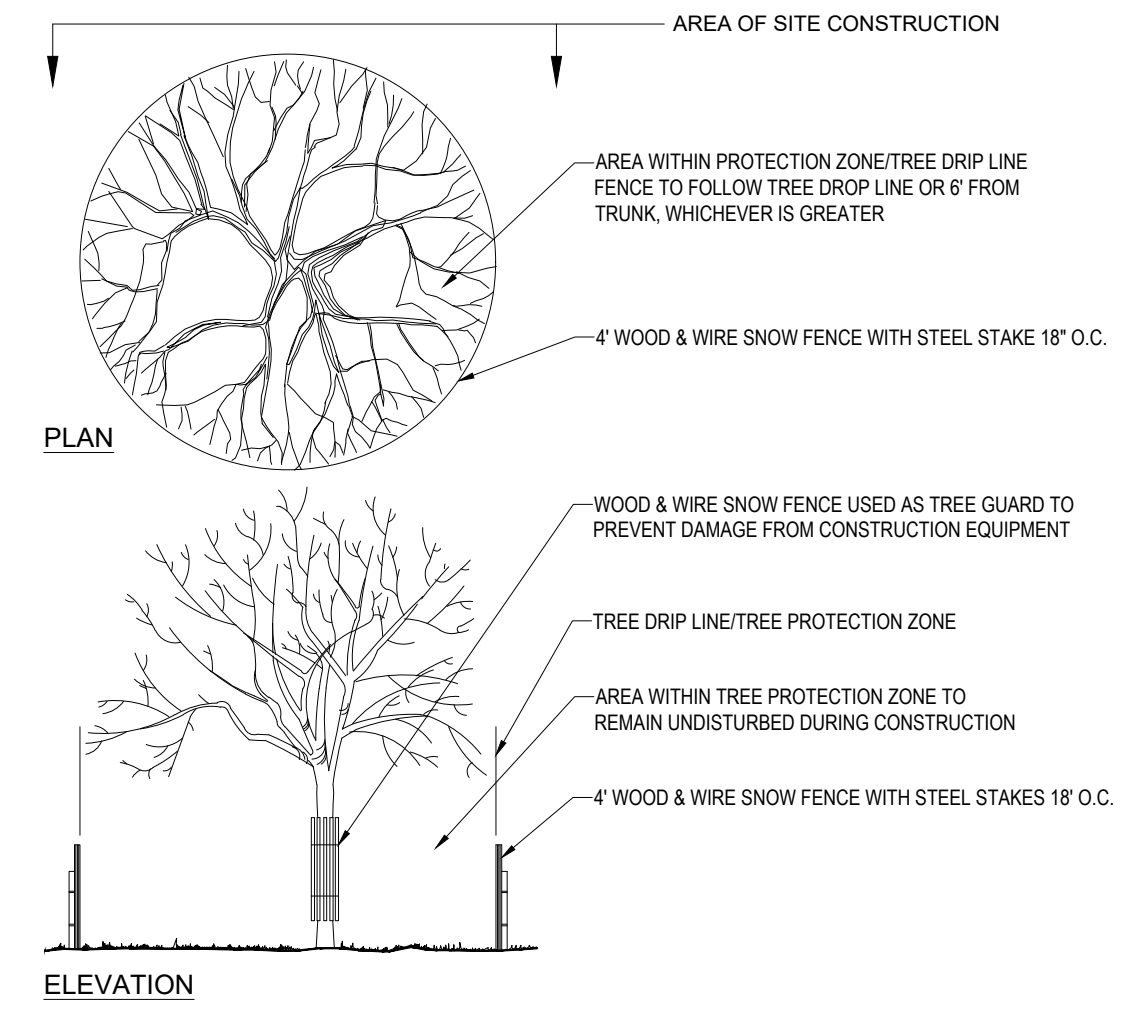
- 1. ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE DONE AS SET FORTH IN THE MOST CURRENT STATE SEDIMENT AND EROSION CONTROL MANUAL.
2. THOSE AREAS UNDERGOING ACTUAL CONSTRUCTION WILL BE LEFT IN AN UNTREATED OR UNVEGETATED CONDITION FOR A MINIMUM TIME PERIOD...

GENERAL EROSION AND SEDIMENT CONTROL NOTES

- 1. THE GENERAL NOTES MUST BE INCLUDED AS PART OF THIS ENTIRE DOCUMENT PACKAGE AND ARE PART OF THE CONTRACT DOCUMENTS. THE GENERAL NOTES ARE REFERENCED HEREIN, AND THE CONTRACTOR MUST REFER TO THEM AND FULLY COMPLY WITH THESE NOTES.
2. EROSION CONTROL MEASURES MUST CONFORM TO THE STATE, LOCAL, AND FEDERAL GUIDELINES FOR URBAN EROSION AND SEDIMENT CONTROL...

THE FOLLOWING CONSTRUCTION SEQUENCE IS RECOMMENDED:

- INSTALLATION OF STABILIZED CONSTRUCTION ENTRANCE/EXIT (AS SHOWN)
-INSTALLATION OF EROSION CONTROL BARRIER (STRAW BALES AND SILT FENCE) (AS SHOWN)
-INSTALLATION OF INLET PROTECTION IN STREET (AS SHOWN)



TREE PROTECTION DURING SITE CONSTRUCTION

RECOMMENDED CONSTRUCTION SEQUENCE

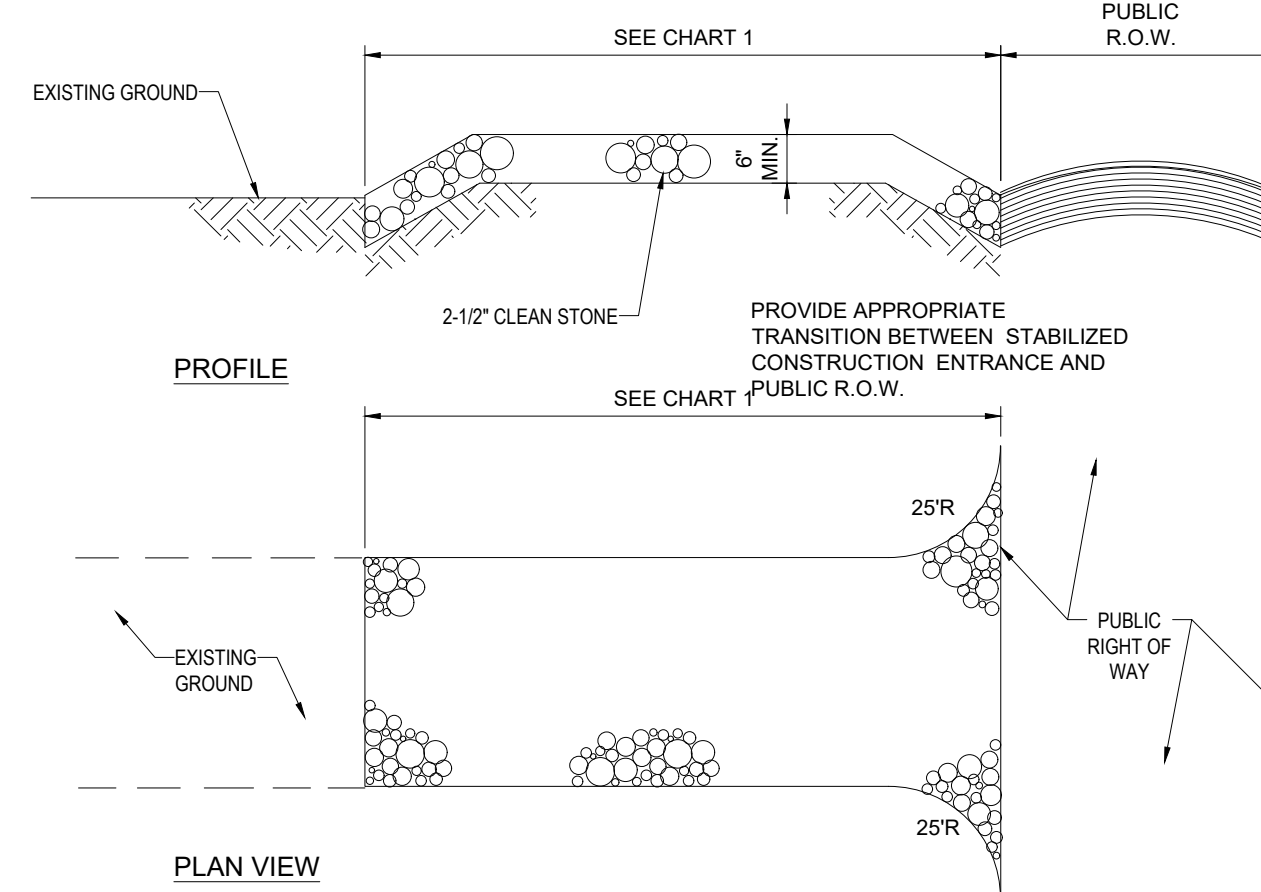
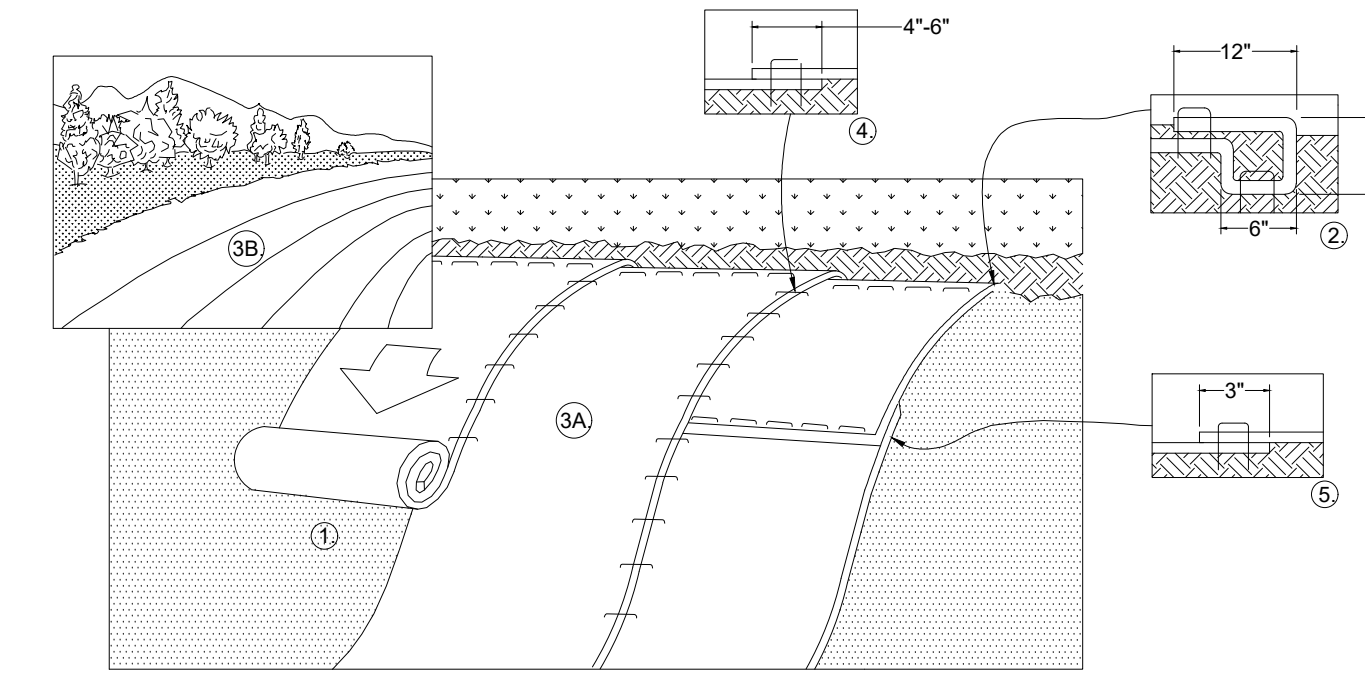


Table with 2 columns: PERCENT SLOPE OF ROADWAY and LENGTH OF STONE REQUIRED. Rows include 0 TO 2%, 2% TO 5%, and >5%.

STABILIZED CONSTRUCTION ENTRANCE



- 1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6\"/>

EROSION CONTROL BLANKET 2:1 SLOPES (SLOPE INSTALLATION)

Table with 4 columns: LOCATION PROTECTED AREA, MULCH STRAW, MULCH RATE (1000 SF), and MULCH RATE (1000 SF). Rows include WINDY AREA, MODERATE TO HIGH VELOCITY AREAS, and GREATER THAN 3:1.

* A HYDRO-APPLICATION OF WOOD OR PAPER FIBER MAY BE APPLIED FOLLOWING SEEDING. A SUITABLE NON-TOXIC BINDER SHALL BE USED TO ADDITIONAL WIND CONTROL.

* MULCH ANCHORING: ANCHOR MULCH WITH PEG AND TWINE (1 SQ. YD/BLOCK); MULCH NETTING (AS PER MANUFACTURER); WOOD CELLULOSE FIBER (750 LBS/ACRE); CHEMICAL TACK (AS PER MANUFACTURER'S SPECIFICATIONS); USE OF A SERRATED STRAIGHT DISK, WETTING FOR SMALL AREAS AND ROAD DITCHES MAY BE PERMITTED.

- 15. PROPOSED LOCATIONS OF SURFACE STORMWATER MANAGEMENT BASINS CAN BE UTILIZED AS A TEMPORARY SEDIMENT TRAP DURING CONSTRUCTION. SEDIMENT TRAPS SHALL BE SIZED AND CONSTRUCTED IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REQUIREMENTS.
15.1. TEMPORARY SEDIMENT TRAPS SHALL BE SIZED PER THE CURRENT EDITION OF THE "MASSACHUSETTS EROSION AND SEDIMENT CONTROL GUIDELINES FOR URBAN AND SUBURBAN AREAS" AND PROVIDE A MINIMUM OF 1,800 CU PER ACRE OF TRIBUTARY AREA WITH A MAXIMUM TRIBUTARY AREA OF 5 ACRES...

- 19. THE CONTRACTOR MUST LOCATE CONSTRUCTION WASTE MATERIAL STORAGE AREAS TO MINIMIZE EXPOSURE TO STORMWATER. THE CONTRACTOR MUST IMMEDIATELY PLACE CONSTRUCTION WASTE IN ON-SITE STORAGE CONTAINERS UNTIL THAT CONSTRUCTION WASTE IS READY FOR OFF-SITE DISPOSAL.

- 21. WINTER CONSTRUCTION PERIOD: NOVEMBER 1 THROUGH APRIL 15.
22. WINTER EXCAVATION AND EARTHWORK SHALL BE DONE SUCH THAT THE AMOUNT OF AREA OPEN AT ONE TIME IS MINIMIZED TO THE MAXIMUM EXTENT PRACTICABLE AND IN CONFORMANCE WITH THE STORMWATER POLLUTION PREVENTION PLAN SUCH THAT ADEQUATE PROVISIONS ARE EMPLOYED TO CONTROL STORMWATER RUNOFF.

- 23. CONTINUATION OF EARTHWORK OPERATION ON ADDITIONAL AREAS SHALL NOT BEGIN UNTIL THE EXPOSED SOIL SURFACE ON THE AREA BEING WORKED HAS BEEN STABILIZED SUCH THAT NO LARGER AREA OF THE SITE IS WITHOUT EROSION CONTROL PROTECTION AS LISTED IN ITEM 2 ABOVE.

- 24. AN AREA SHALL BE CONSIDERED TO HAVE BEEN TEMPORARILY STABILIZED WHEN EXPOSED SURFACES HAVE BEEN EITHER MULCHED WITH STRAW OR STRAW AT A RATE OF 100 LB. PER 1,000 SQUARE FEET (WITH OR WITHOUT SEEDING) OR DORMANT SEEDING, MULCHED AND ADEQUATELY ANCHORED BY AN APPROVED ANCHORING TECHNIQUE.

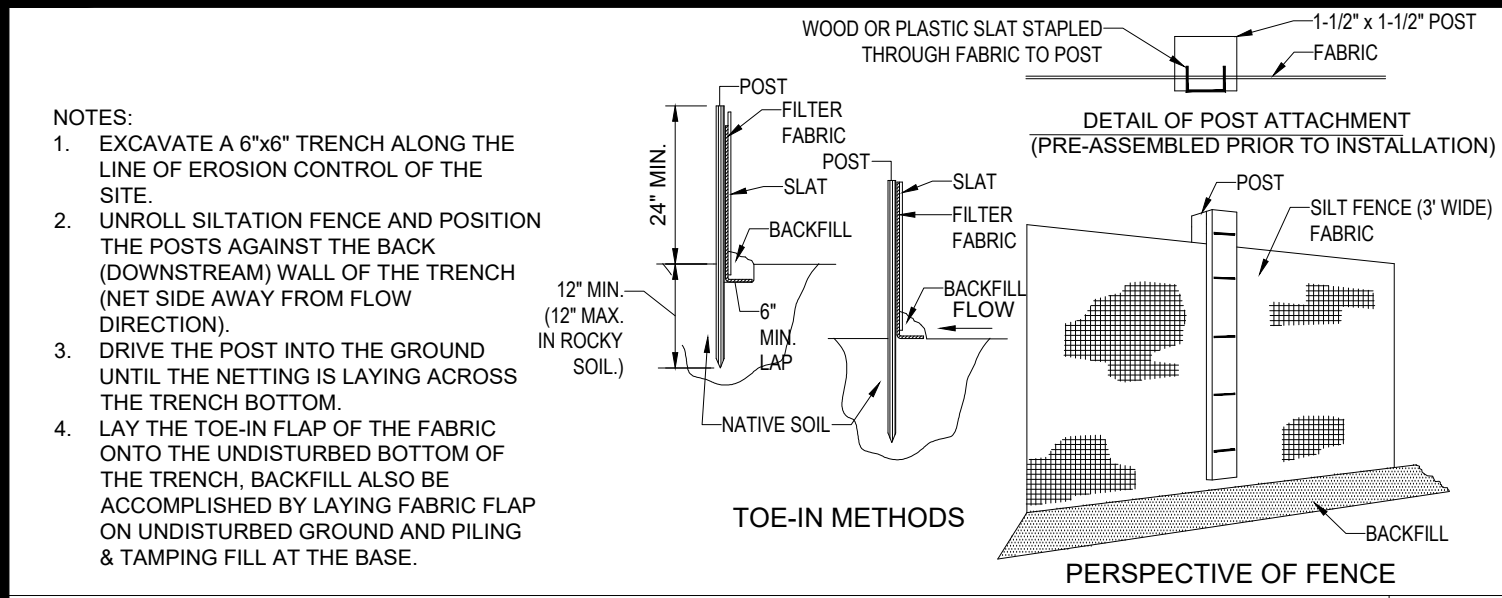
- 26. MULCHING REQUIREMENTS:
26.1. BETWEEN THE DATES OF NOVEMBER 1ST AND APRIL 15TH ALL MULCH SHALL BE ANCHORED BY EITHER PEG LINE, MULCH NETTING OR WOOD CELLULOSE FIBER.
26.2. MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL DRAINAGE WAYS WITH A SLOPE GREATER THAN 3% FOR SLOPE EXPOSED TO DIRECT WINDS AND FOR ALL OTHER SLOPES GREATER THAN 8%.

- 27. ALL DISTURBED AREAS SHALL BE STABILIZED IN ACCORDANCE WITH THE STORMWATER PREVENTION PLAN.

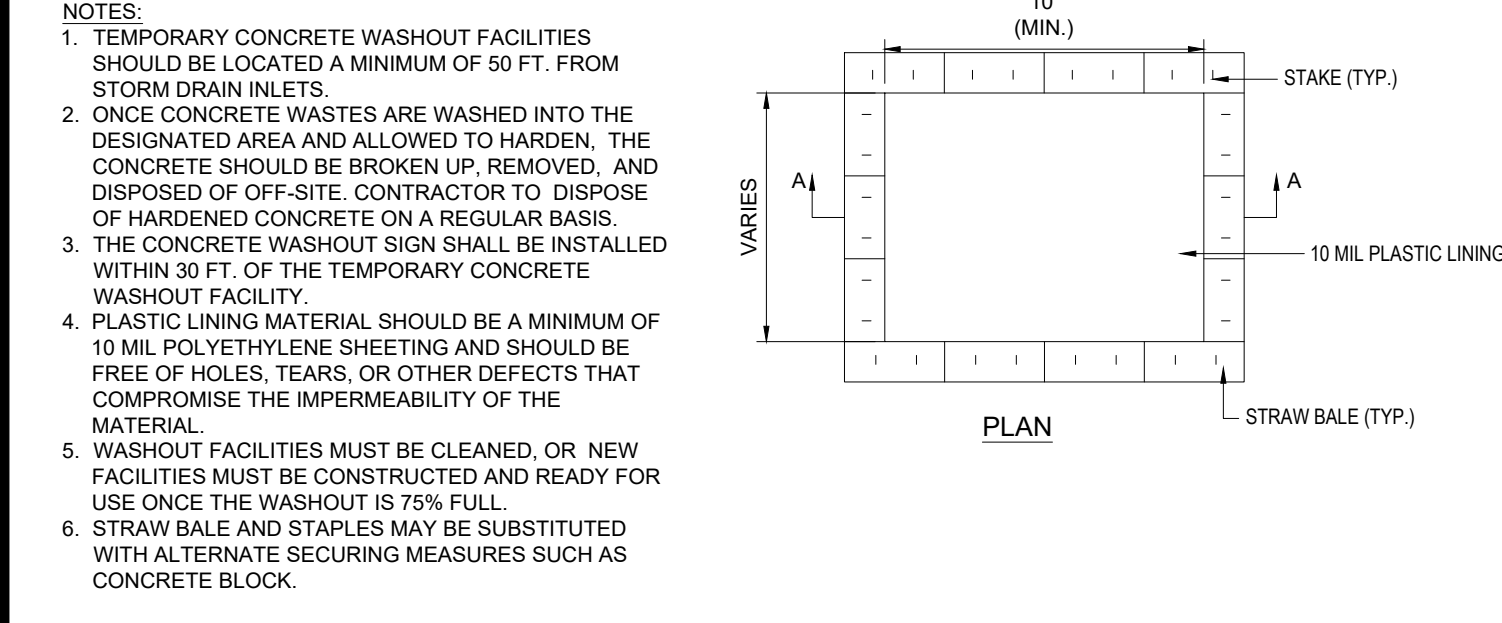
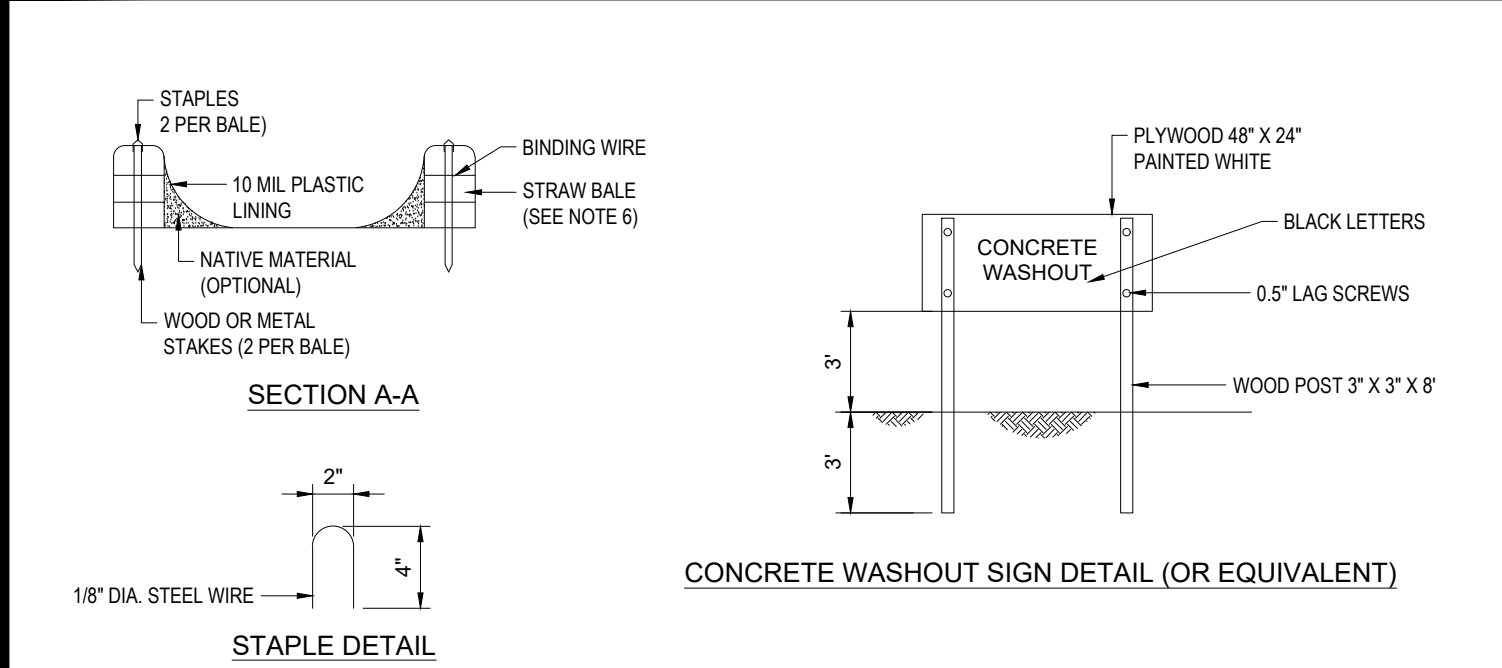
- 28. DURING THE WINTER CONSTRUCTION PERIOD ALL SNOW SHALL BE REMOVED FROM AREAS OF SEEDING AND MULCHING PRIOR TO PLACEMENT.

SEE LA PLANS FOR ADDITIONAL EROSION CONTROL DETAILS ALONG PAUL BROOK

TEMPORARY STOCKPILE



SILTATION FENCE



CONCRETE WASTE MANAGEMENT AREA

Table with 2 columns: PROPERTIES and TEST METHOD UNITS. Rows include GRAB TENSILE STRENGTH, GRAB TENSILE ELONGATION, PUNCTURE, MULLEN BURST, TRAPEZOID TEAR, UV RESISTANCE, APPARENT OPENING SIZE, FLOW RATE, PERMITTIVITY, and MODERATE TO HIGH FLOW GEOTEXTILE FABRIC SPECIFICATION TABLE.

FILTER SACS (GRADED INLETS)

BOHLER logo and contact information: SITE CIVIL AND CONSULTING ENGINEERING, PROGRAM MANAGEMENT, LANDSCAPE ARCHITECTURE, SUSTAINABLE DESIGN, PERMITTING SERVICES, TRANSPORTATION SERVICES.

Table with 5 columns: REV, DATE, COMMENT, CHECKED BY, DRAWN BY. Rows include revisions for building design, response to comments, and landscaping plan.

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PROJECT No.: MAB220089.00
DRAWN BY: ACL
CHECKED BY: TAH
DATE: 03/10/2023
CAD ID: MAB220089.00-SPFD-5A

NOTICE OF INTENT APPLICATION FOR TOLL BROTHERS, INC

PROPOSED RESIDENTIAL DEVELOPMENT
528 BOYLSTON STREET
CITY OF NEWTON
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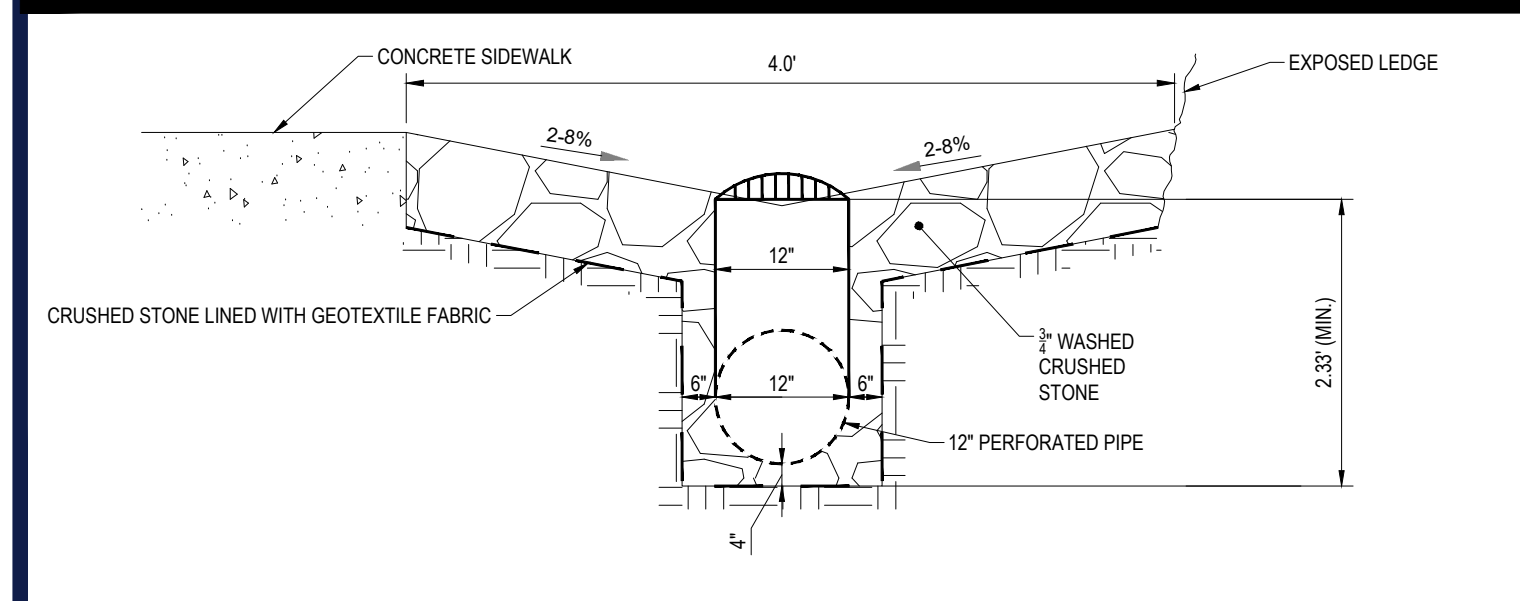
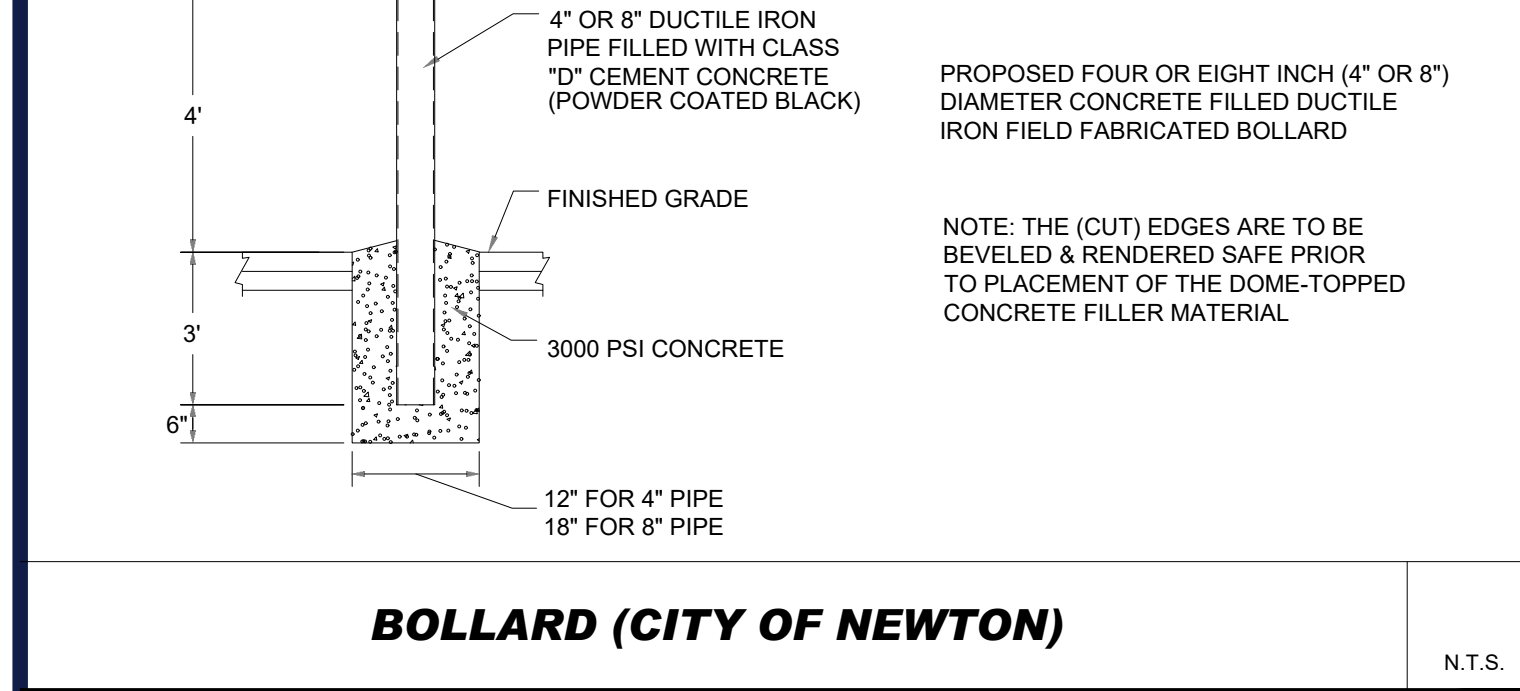
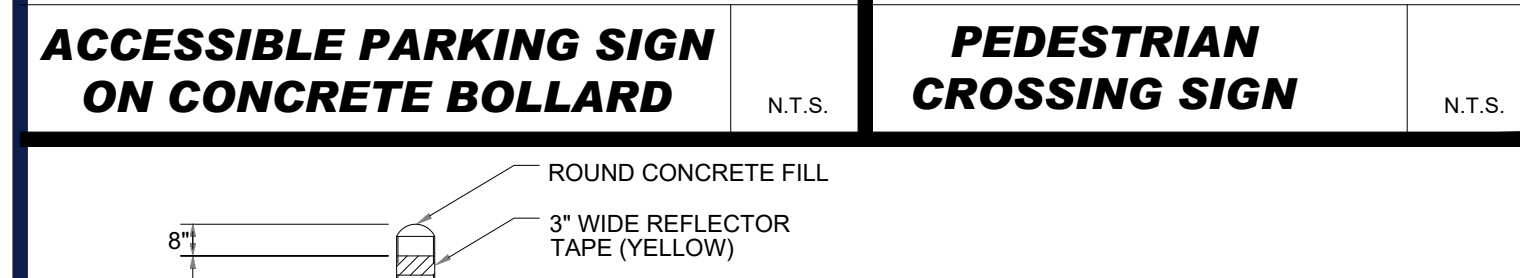
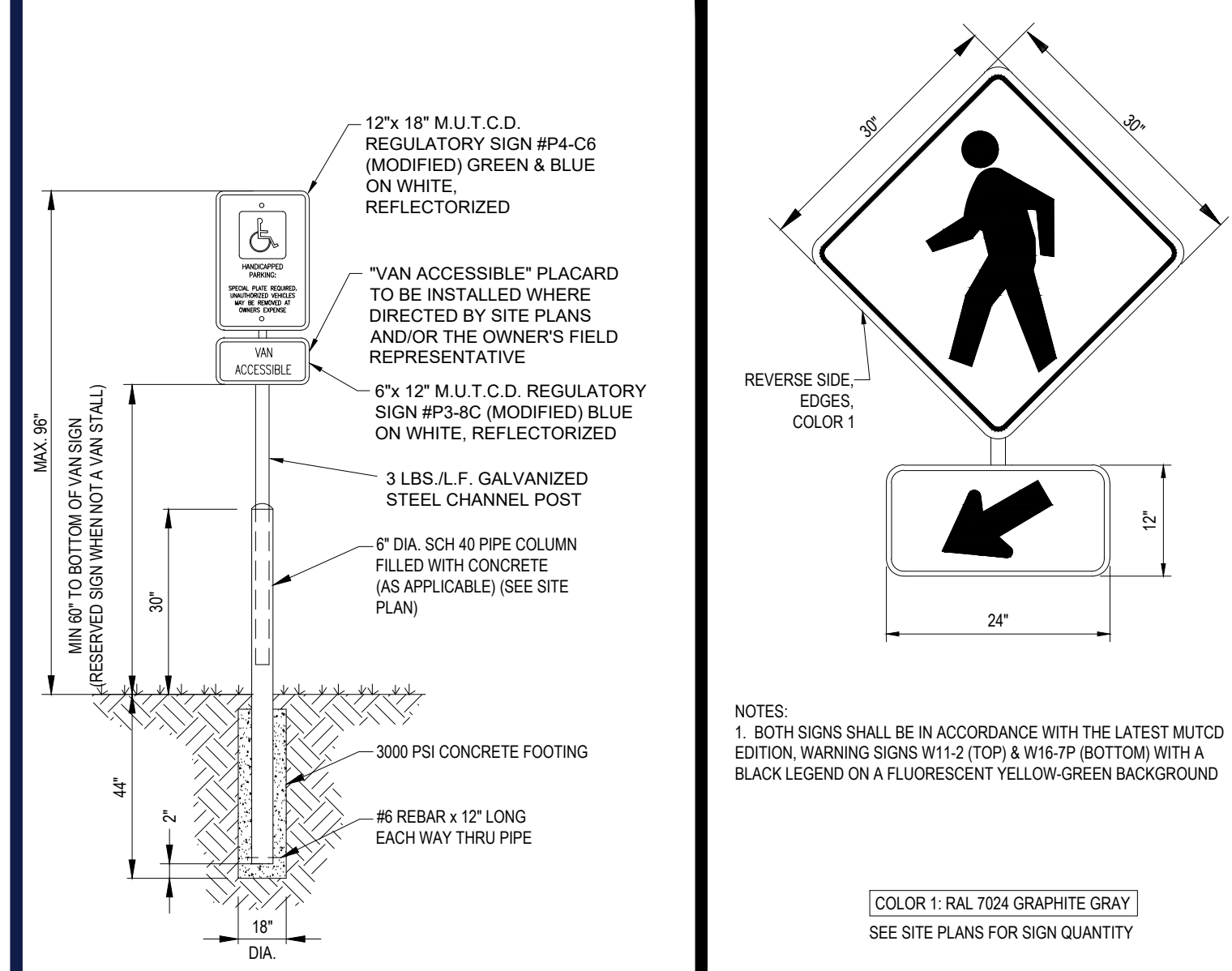
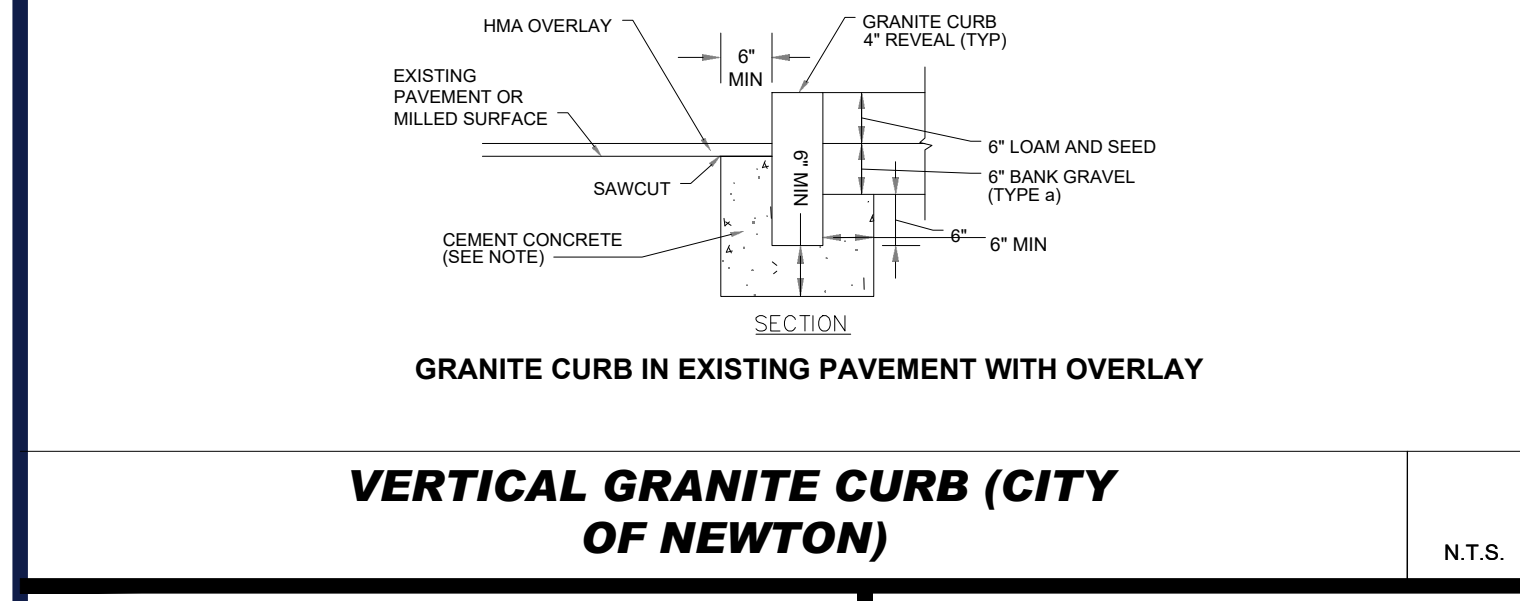
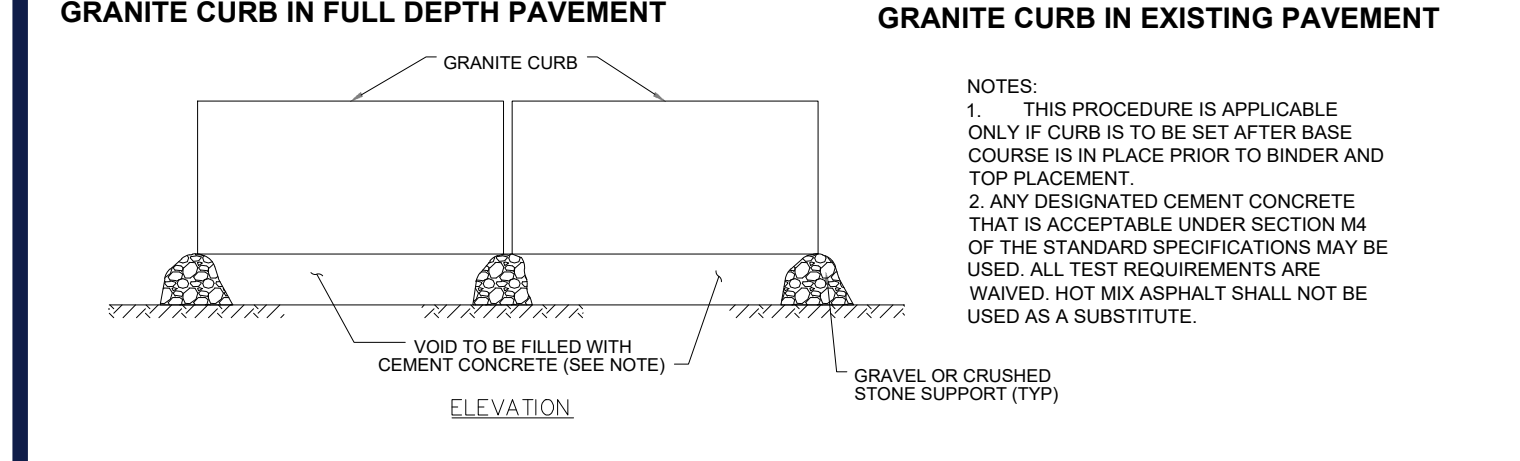
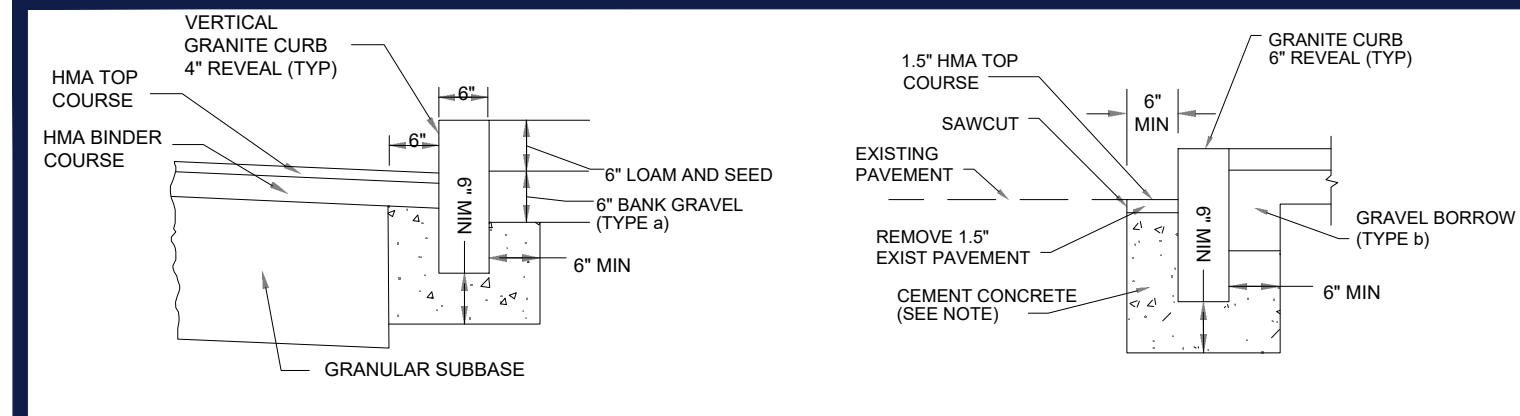
BOHLER logo and address: 45 FRANKLIN STREET, 5th FLOOR, BOSTON, MA 02110, Phone: (617) 849-8040

Professional Engineer seal for Timothy Hayes, No. 51929, State of Massachusetts.

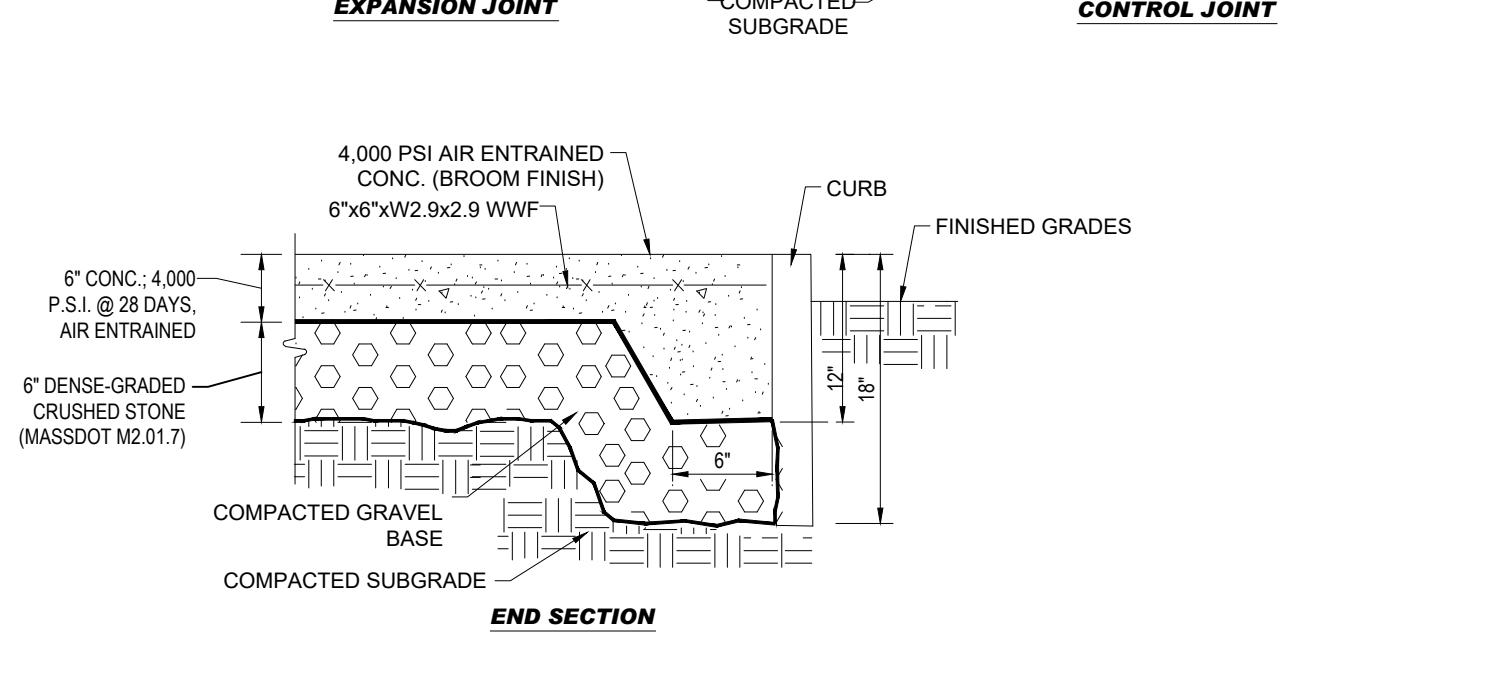
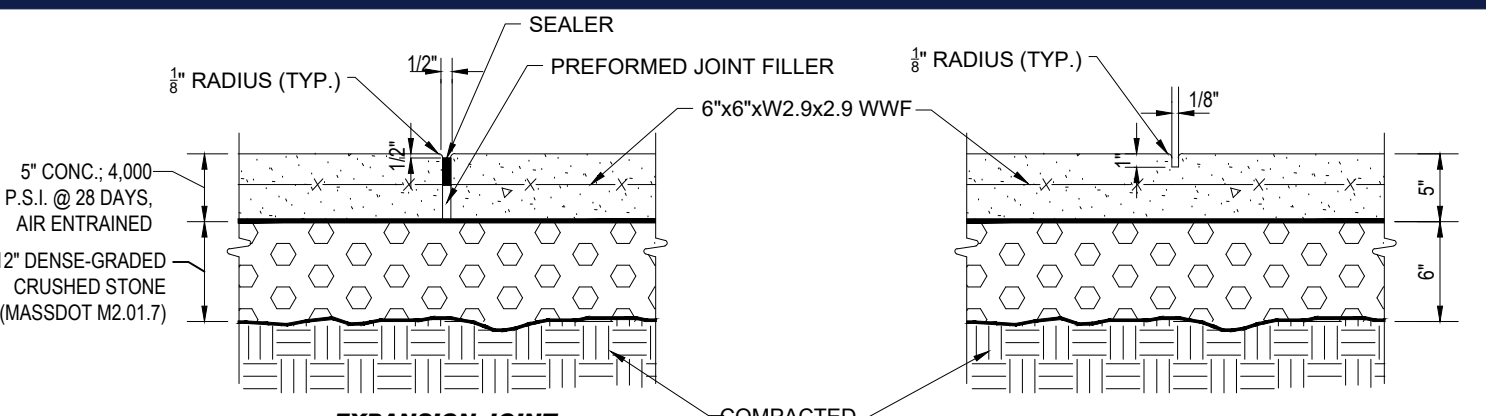
SOIL EROSION & SEDIMENT CONTROL NOTES & DETAILS

SHEET NUMBER: C-602

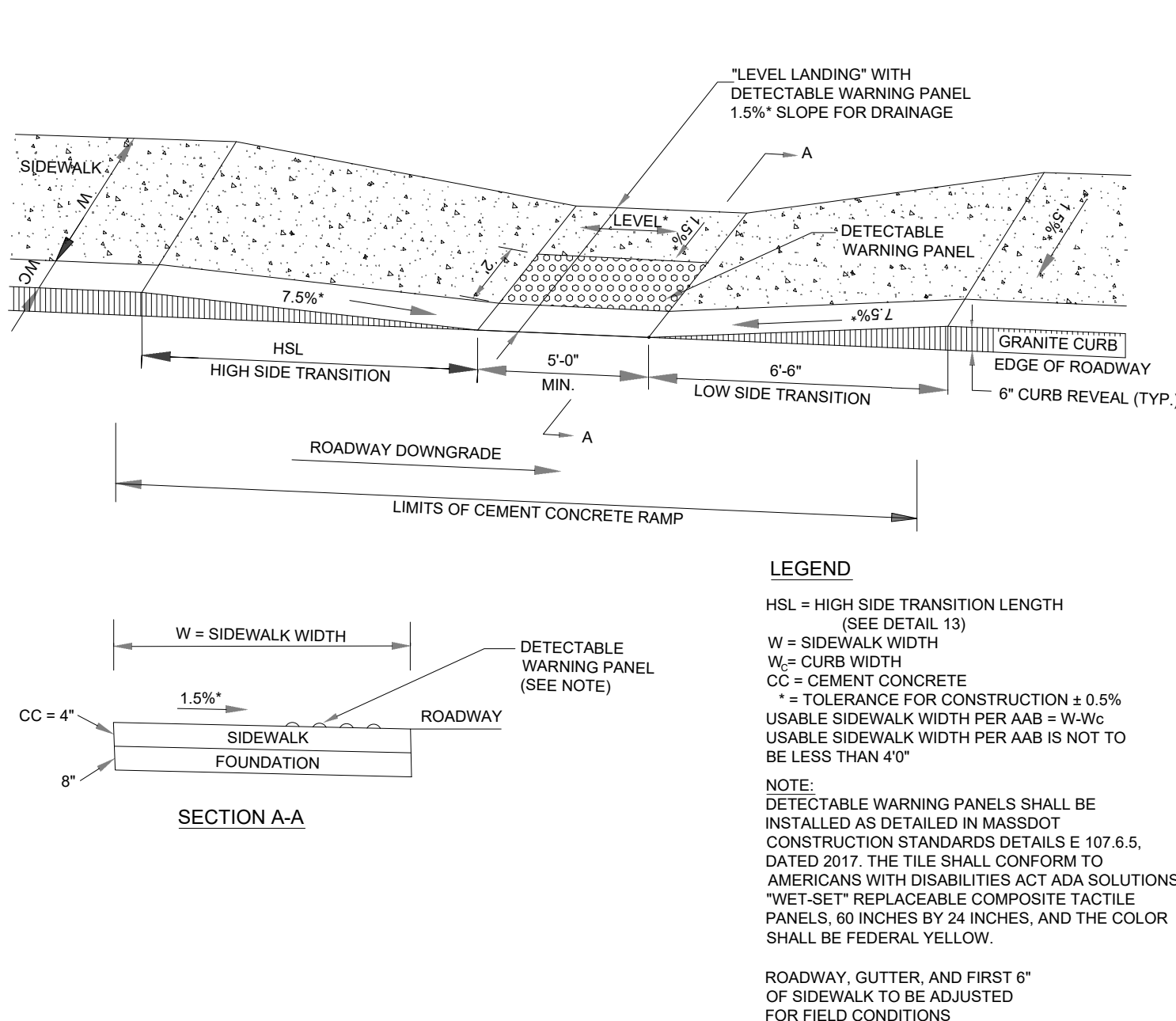
REVISION 6 - 11/08/2024



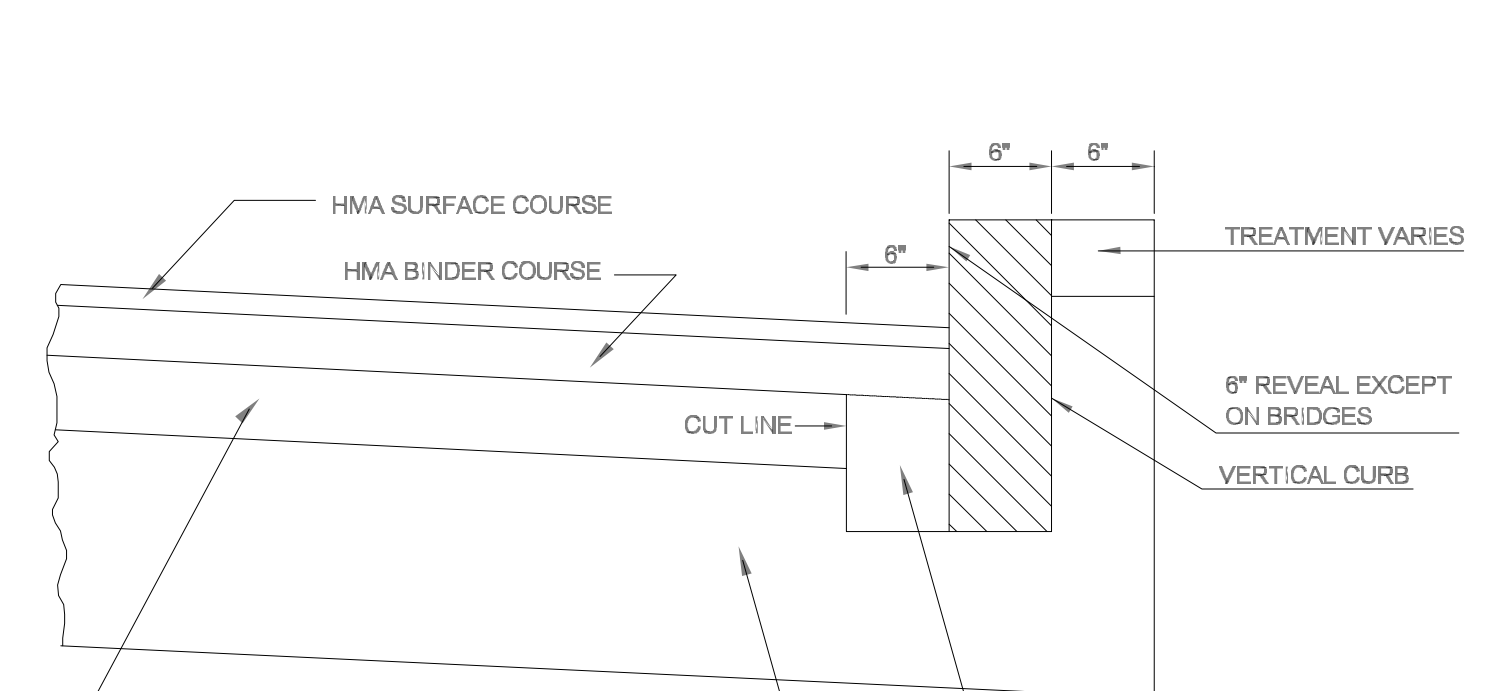
CRUSHED STONE SWALE N.T.S.



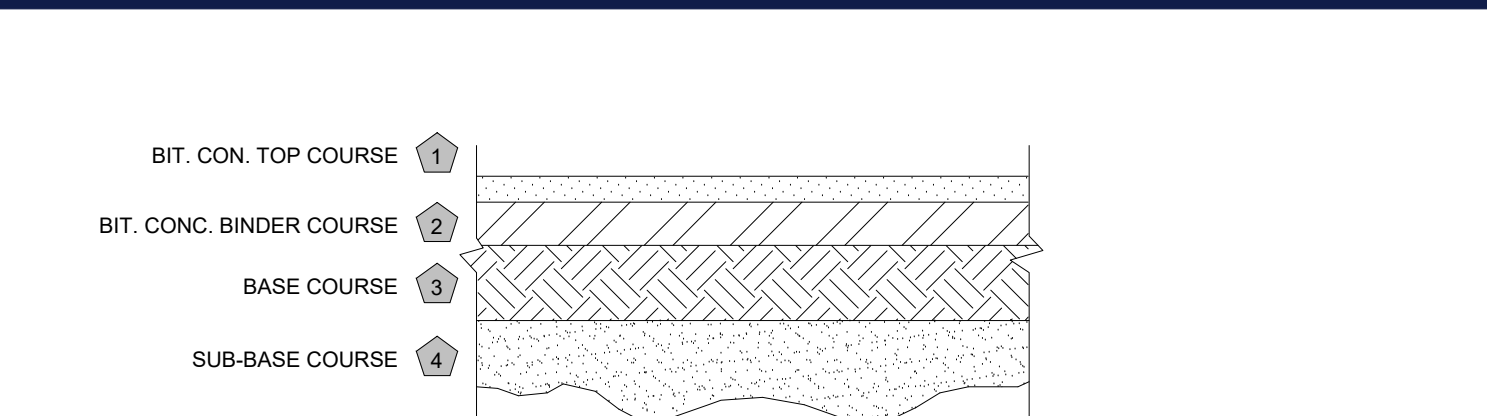
TYPICAL CONCRETE SECTION N.T.S.



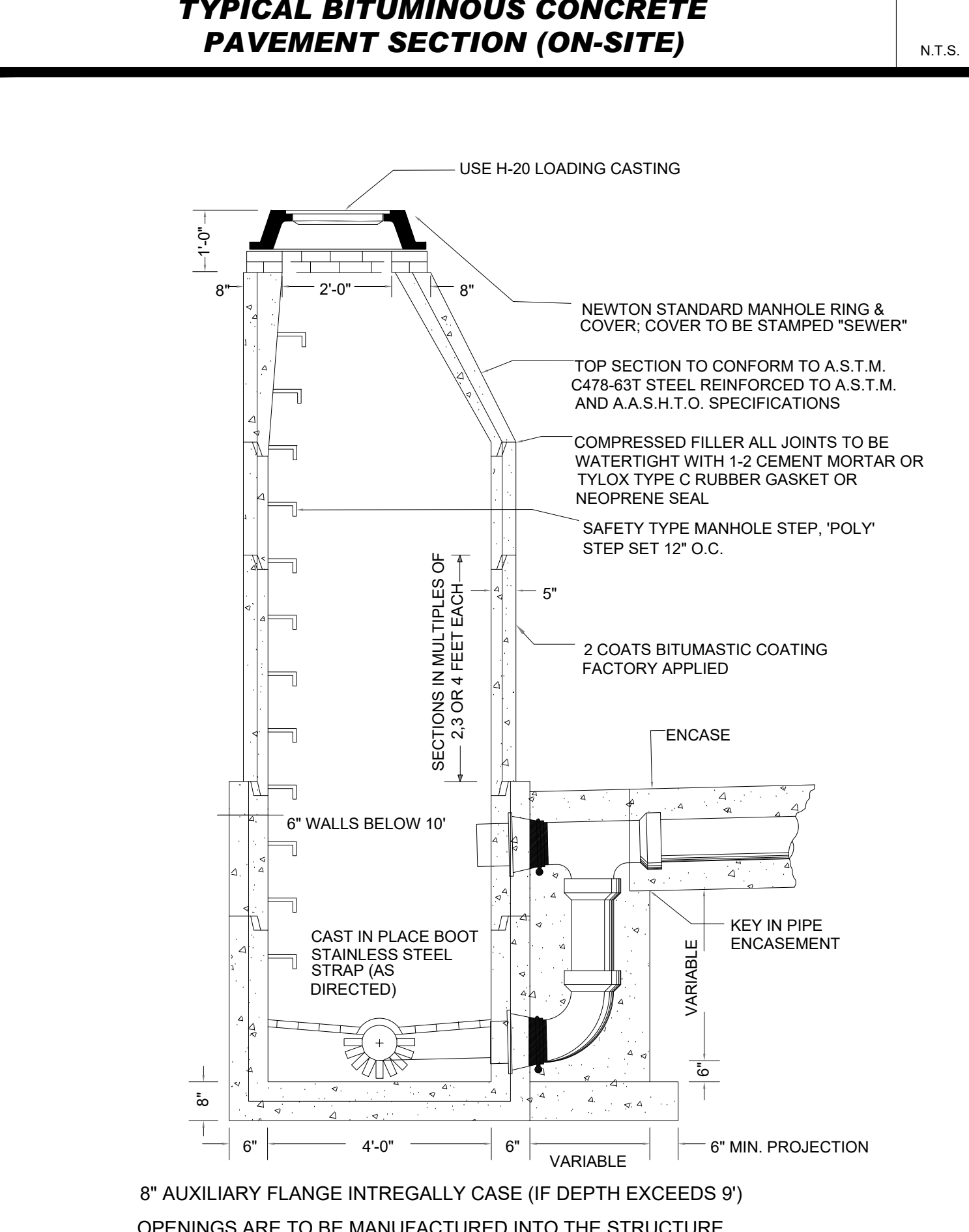
PEDESTRIAN RAMP ON NARROW SIDEWALK WITH DETECTABLE WARNING PANEL (CITY OF NEWTON) N.T.S.



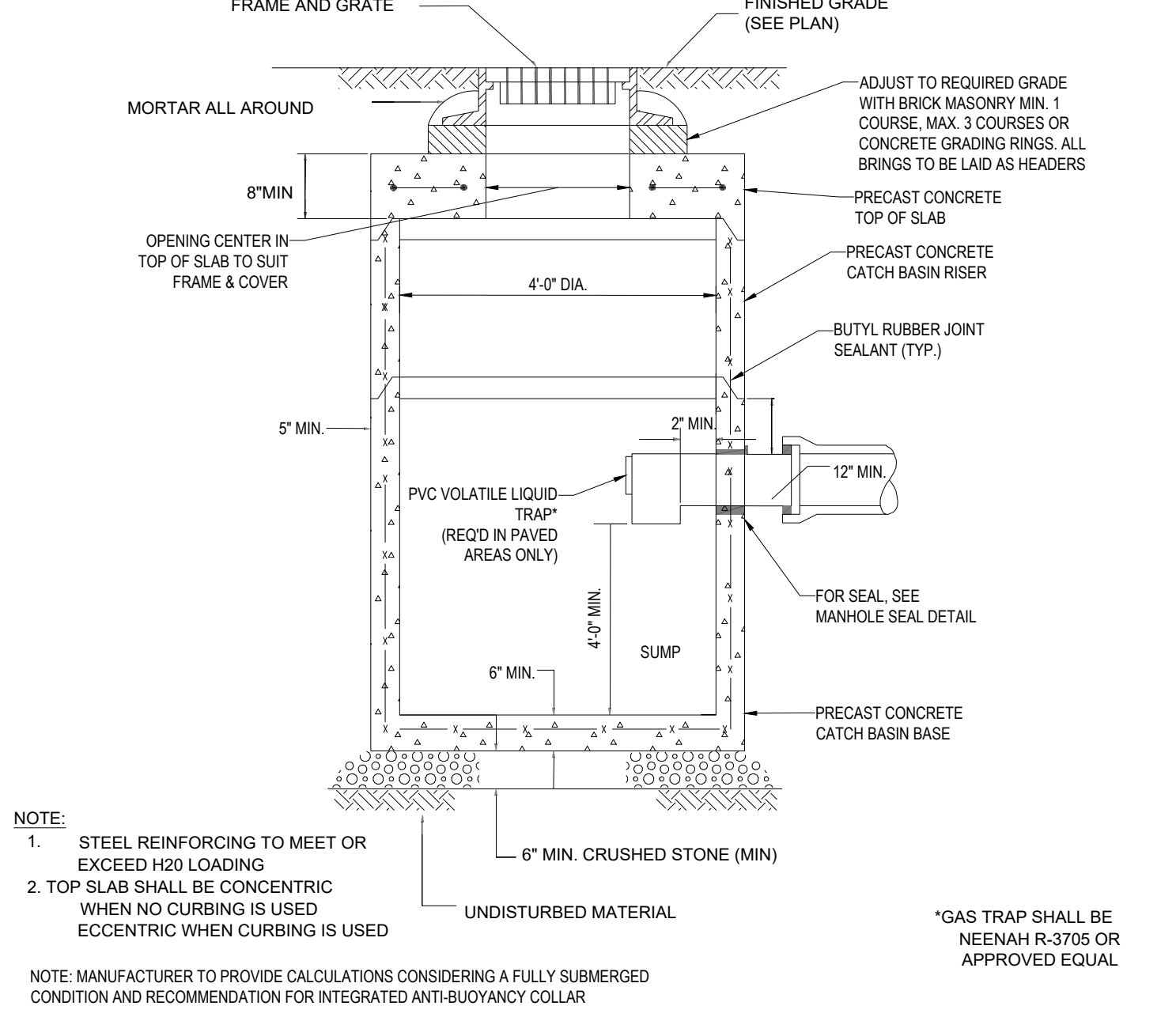
VERTICAL GRANITE CURB (MASSDOT E 106.3.0) N.T.S.



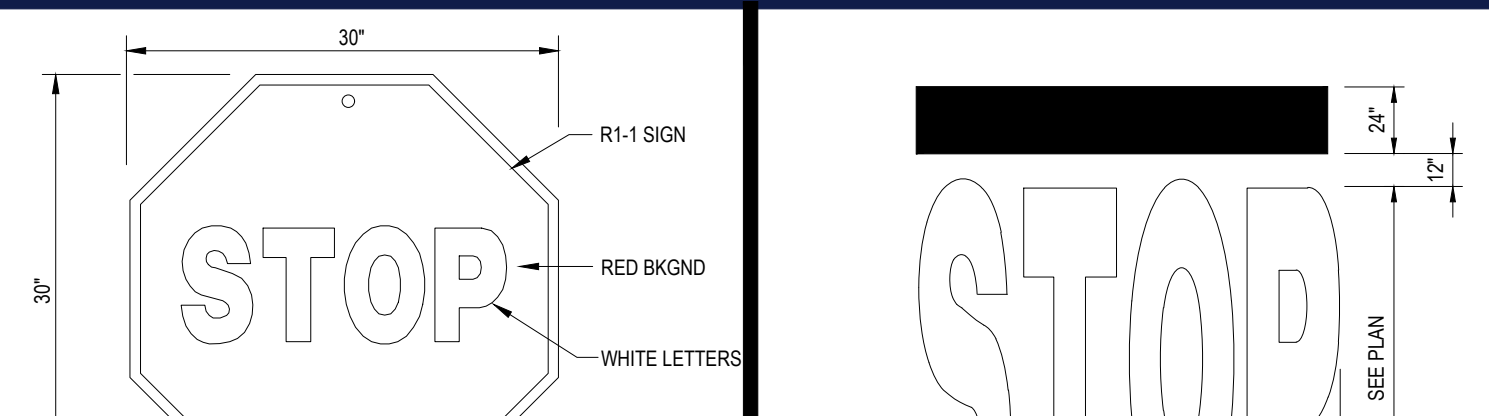
TYPICAL BITUMINOUS CONCRETE PAVEMENT SECTION (ON-SITE) N.T.S.



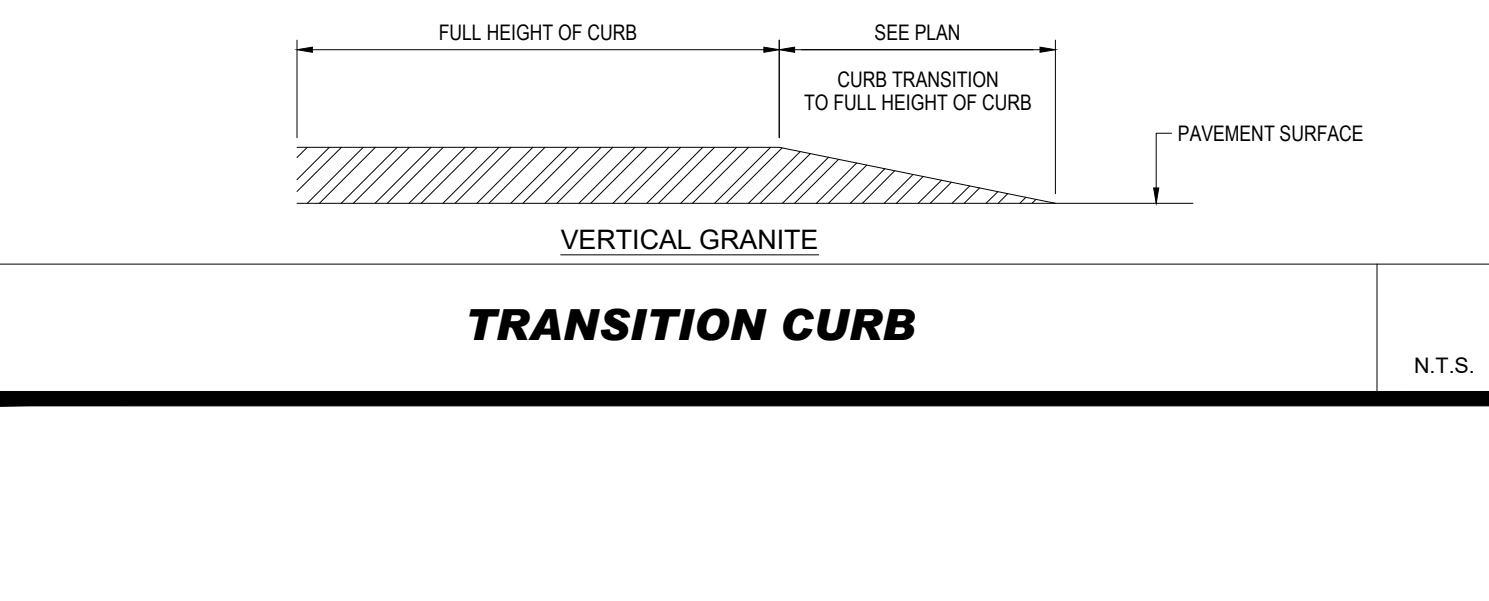
PRECAST CEMENT CONCRETE SEWER MANHOLE & OUTSIDE DROP (CITY OF NEWTON) N.T.S.



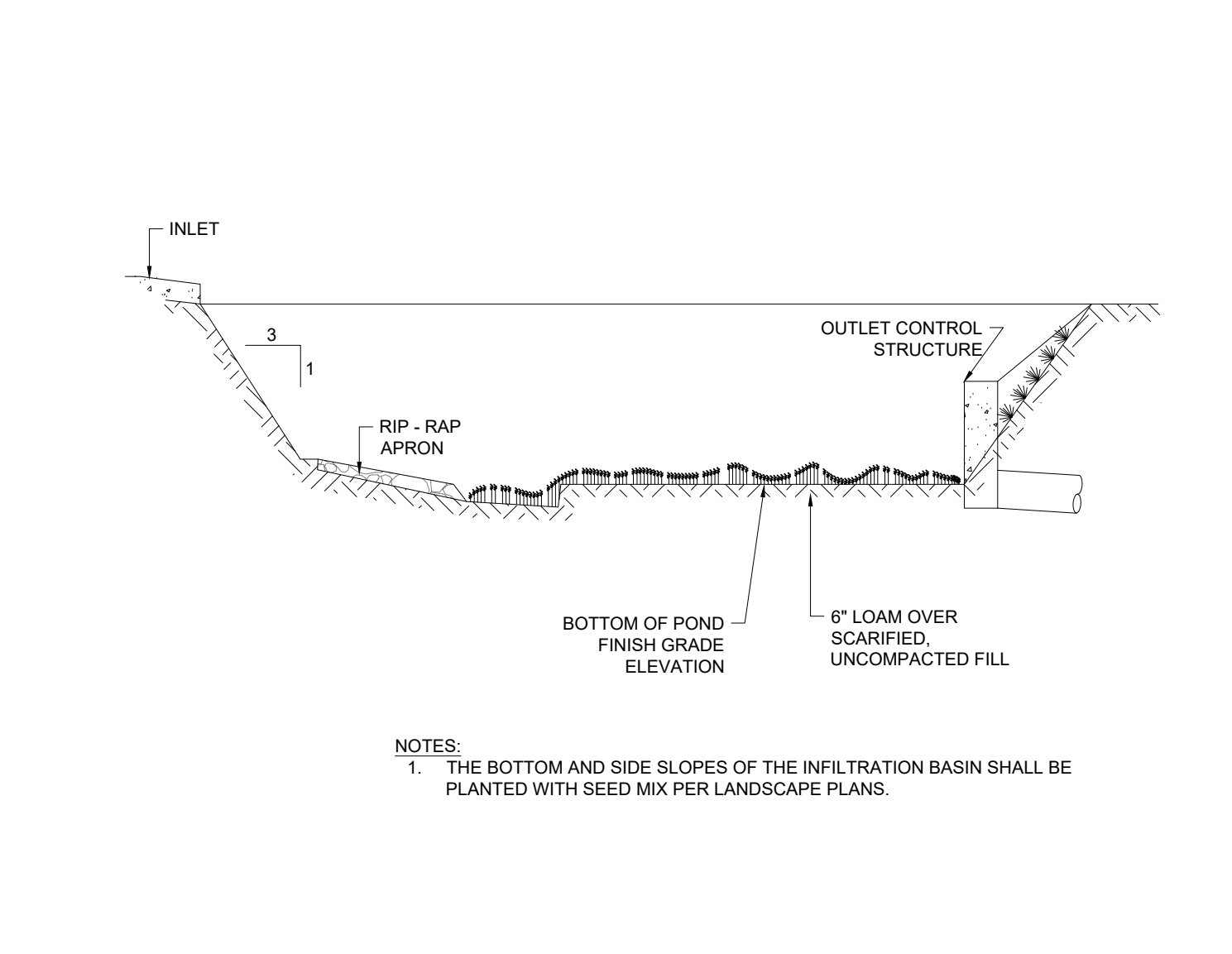
PRECAST CONCRETE CATCH BASIN (CITY OF NEWTON) N.T.S.



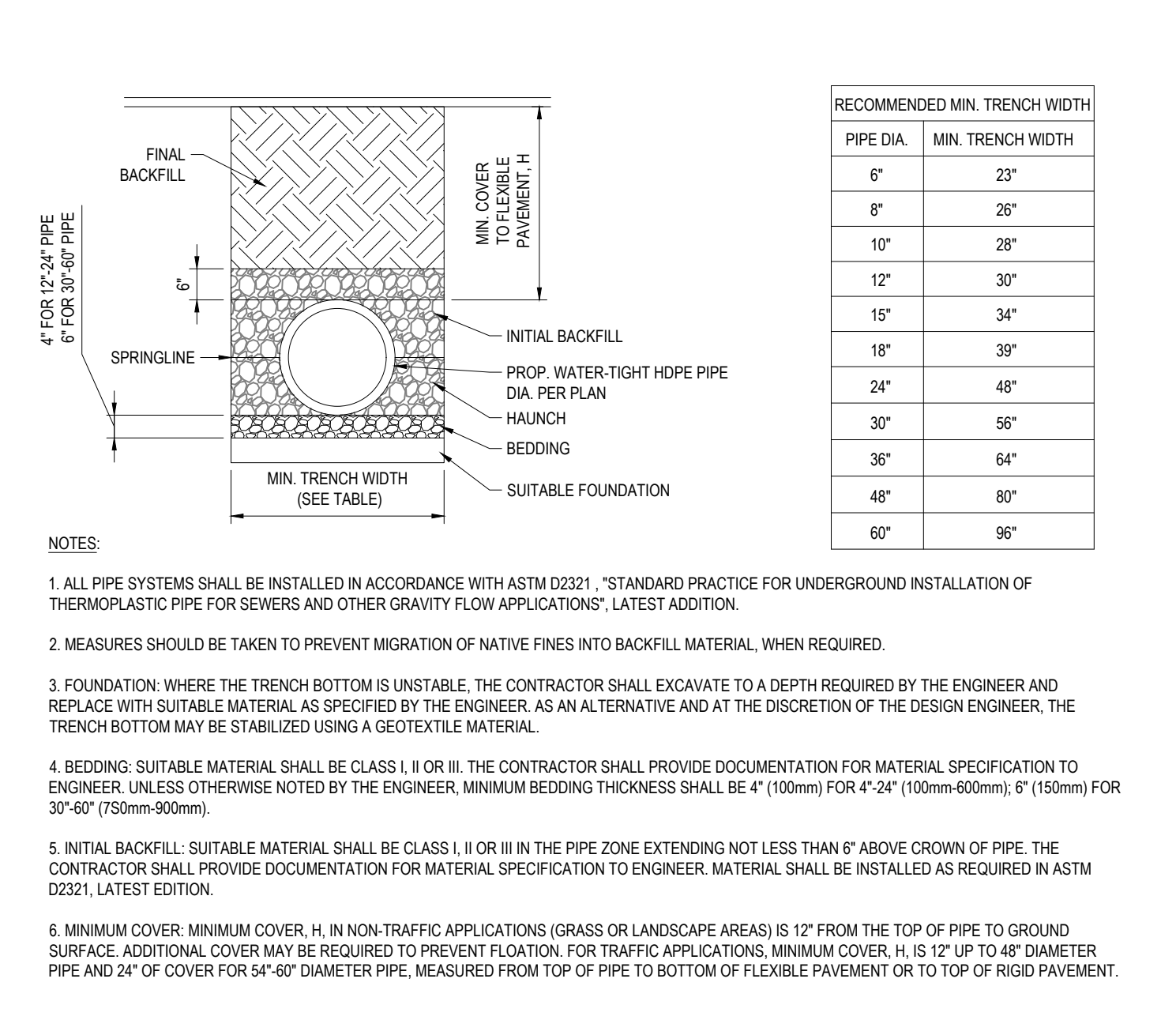
'STOP' SIGN N.T.S. **STOP BAR** N.T.S.



TRANSITION CURB N.T.S.



INFILTRATION BASIN (1P) N.T.S.



HDPE STORM DRAINAGE TRENCH N.T.S.

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SUSTAINABLE DESIGN
PERMITTING SERVICES
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REVISIONS

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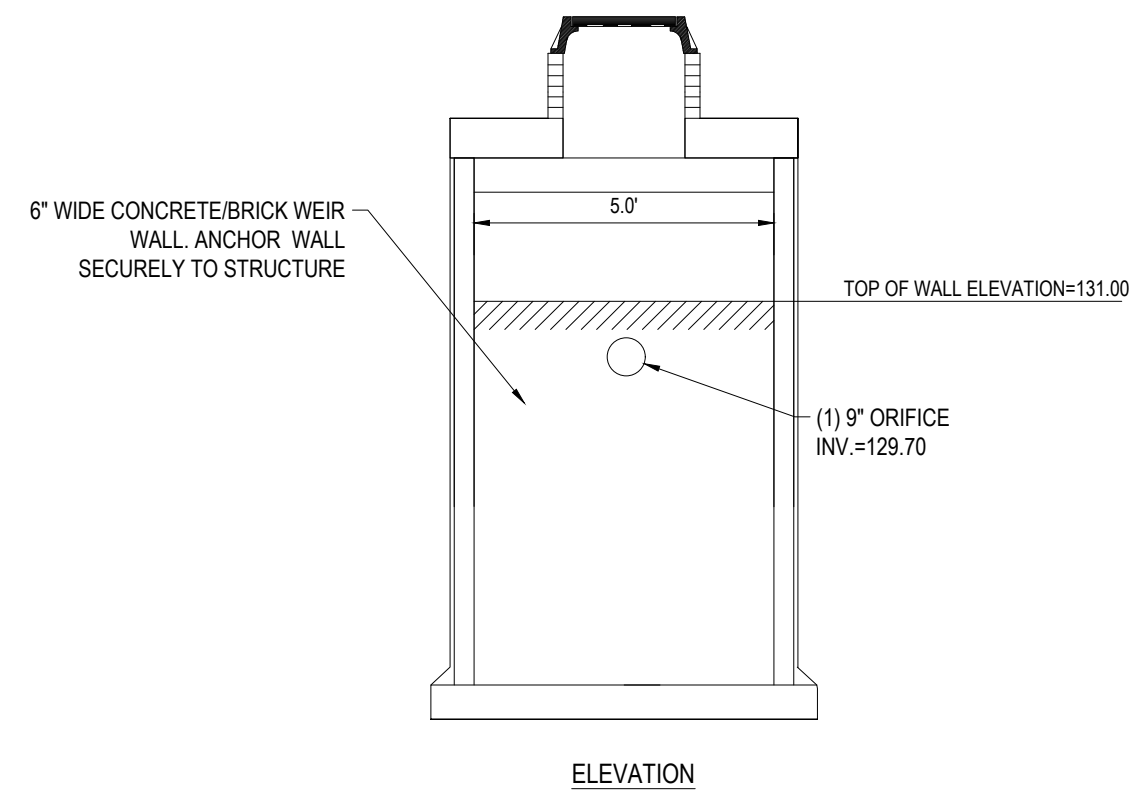
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PROJECT No.: MAB220089.00
DRAWN BY: ACL
DATE: 03/01/2023
CAD LID: MAB220089.00-SPFD-5A

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PROPOSED RESIDENTIAL DEVELOPMENT
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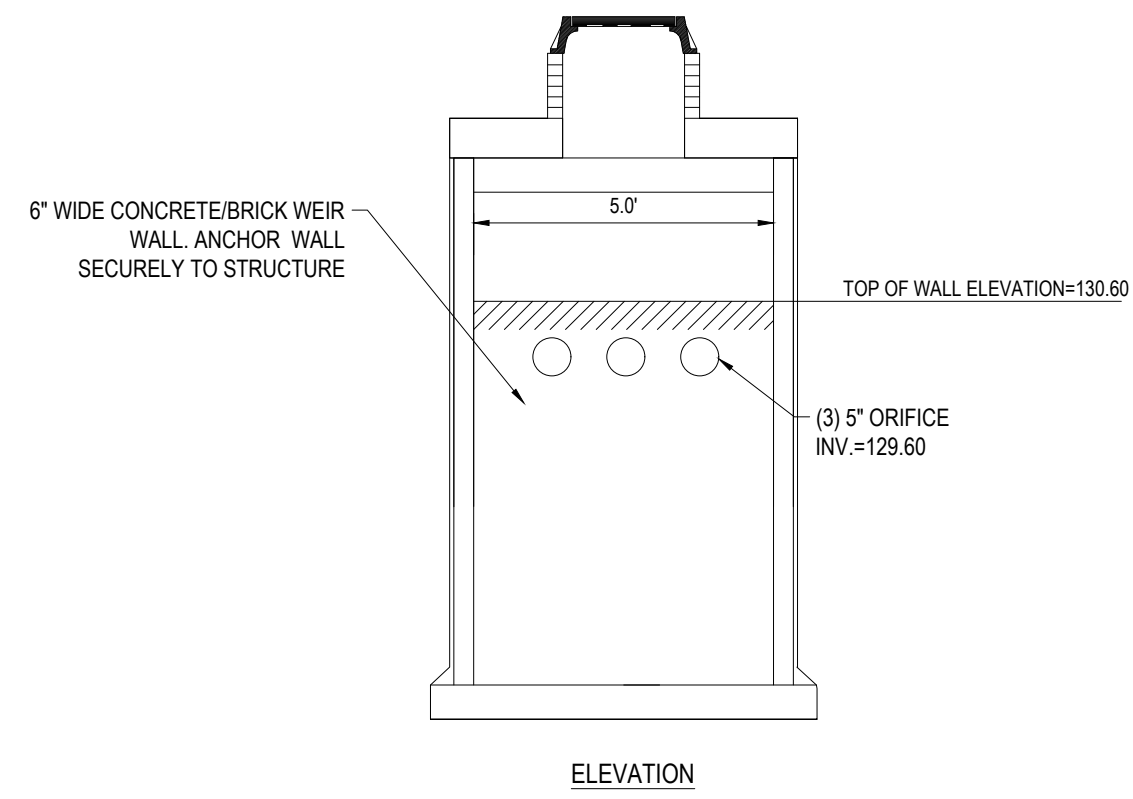
COMMERCIAL SEAL OF MASSACHUSETTS
TIMOTHY A. HAYES
NO. 51929
REGISTERED PROFESSIONAL ENGINEER

DETAIL SHEET
SHEET NUMBER:
C-701
REVISION 6 - 11/08/2024



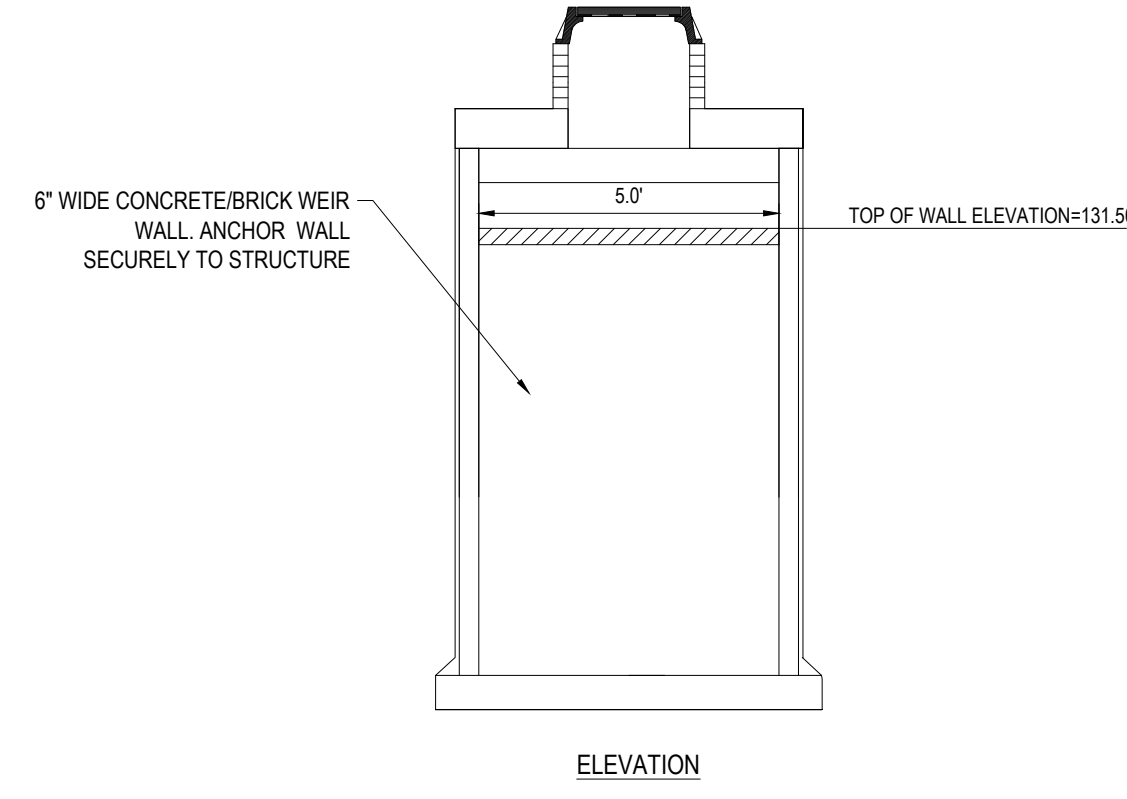
OUTLET CONTROL STRUCTURE (OCS-5)

N.T.S.



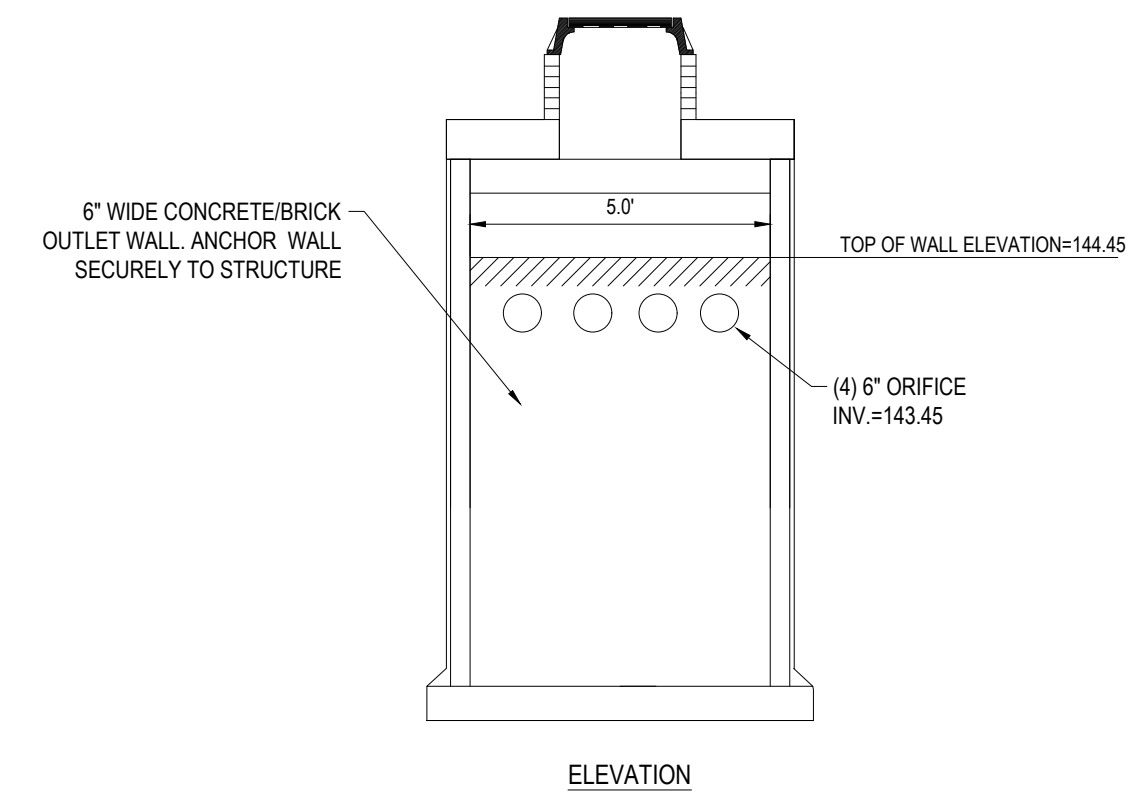
OUTLET CONTROL STRUCTURE (OCS-2)

N.T.S.



OUTLET CONTROL STRUCTURE (OCS-3)

N.T.S.



OUTLET CONTROL STRUCTURE (OCS-4)

N.T.S.

REVISIONS

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5	07/18/2024	RESPONSE TO COMMENTS	ACL
6	11/08/2024	RESPONSE TO COMMENTS	TAH



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PERMIT SET

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PROJECT No.: MAB220089.00
 DRAWN BY: ACL
 CHECKED BY: TAH
 DATE: 03/01/2023
 CAD ID: MAB220089.00-SPPD-SA

PROJECT:

NOTICE OF INTENT APPLICATION FOR

TOLL BROTHERS, INC

PROPOSED RESIDENTIAL DEVELOPMENT

528 BOYLSTON STREET
 CITY OF NEWTON
 MIDDLESEX COUNTY, MA

BOHLER

45 FRANKLIN STREET, 5th FLOOR
 BOSTON, MA 02110
 Phone: (617) 849-8040

www.BohlerEngineering.com



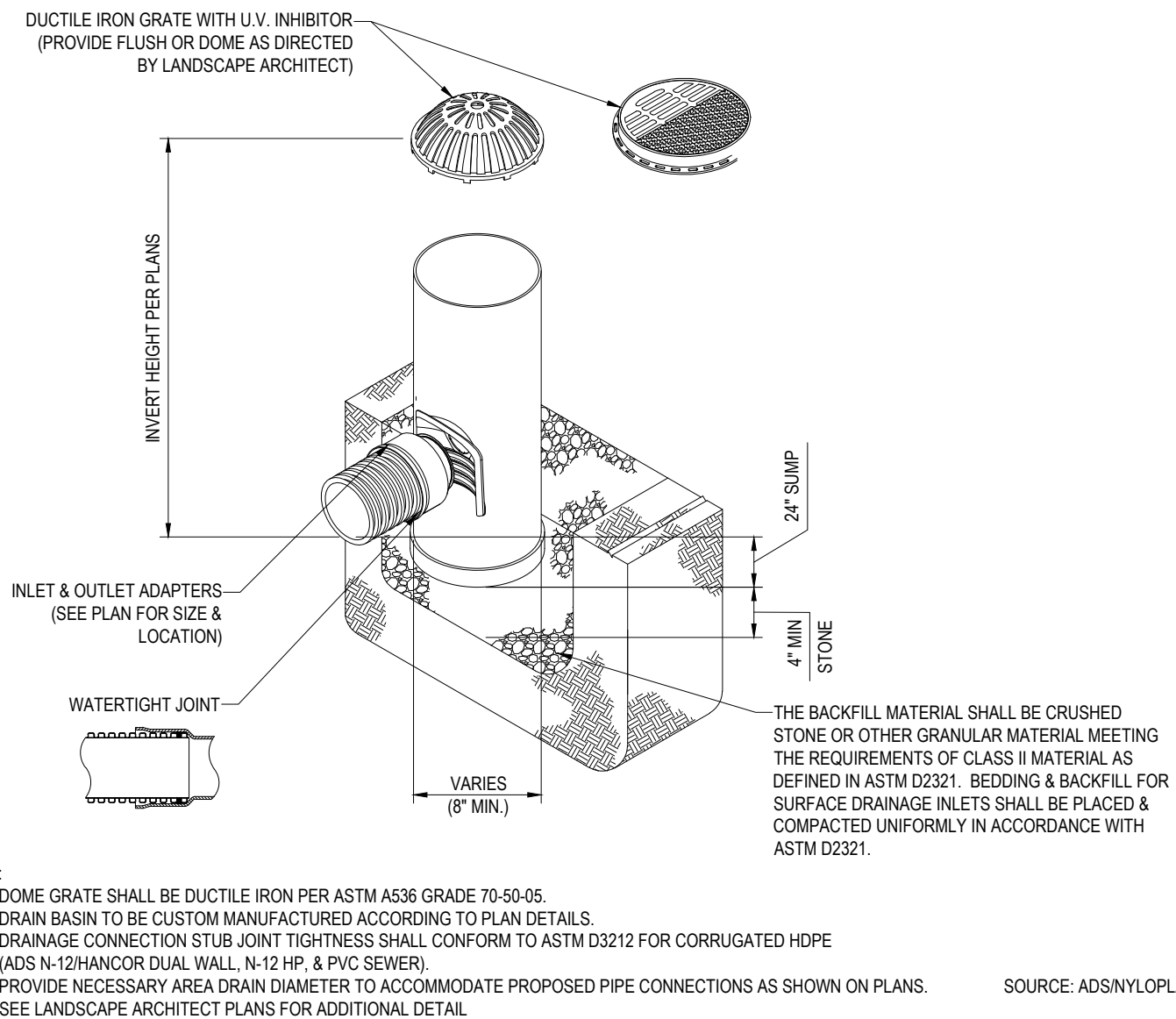
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DETAIL SHEET

SHEET NUMBER:

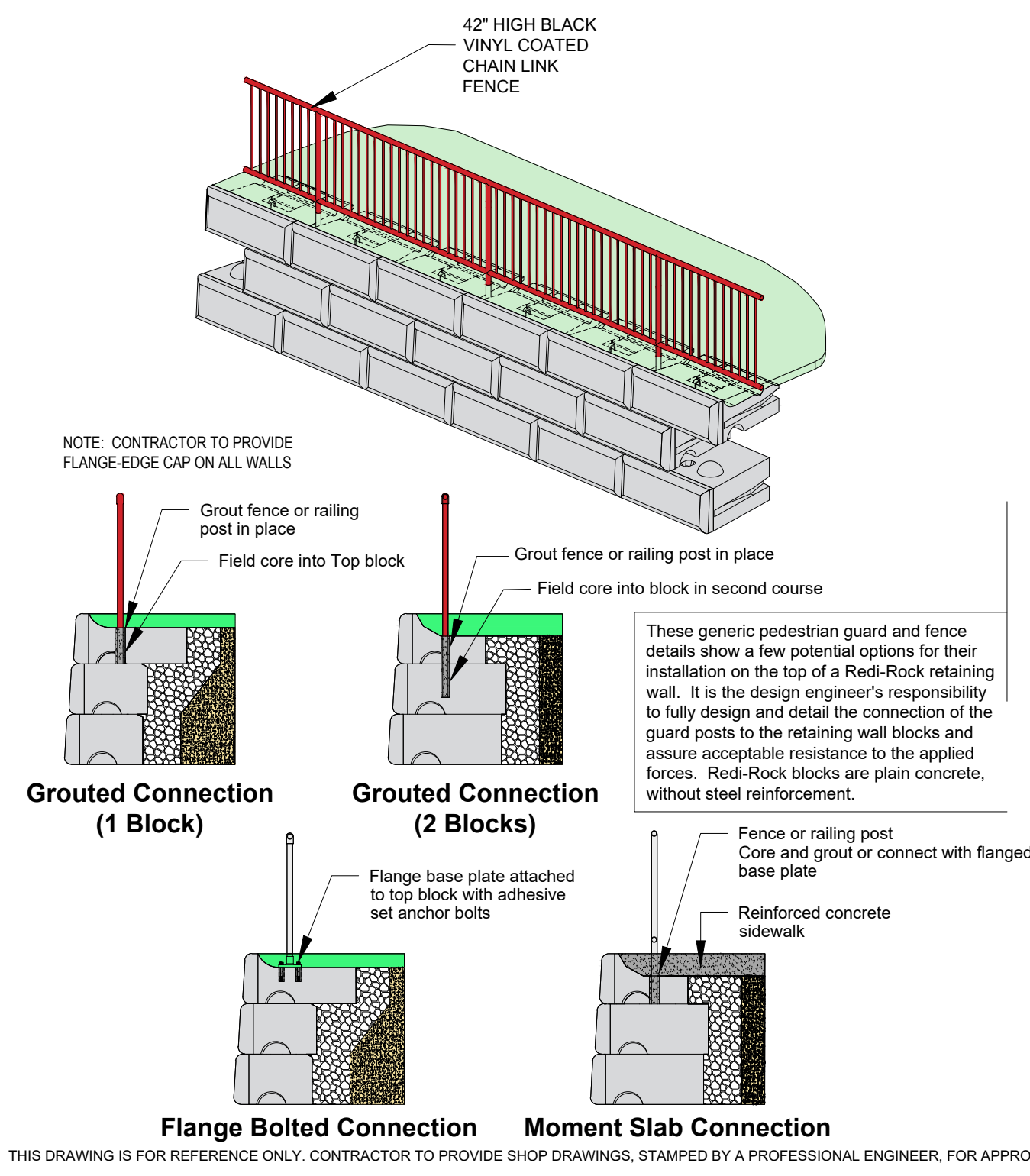
C-702

REVISION 6 - 11/08/2024



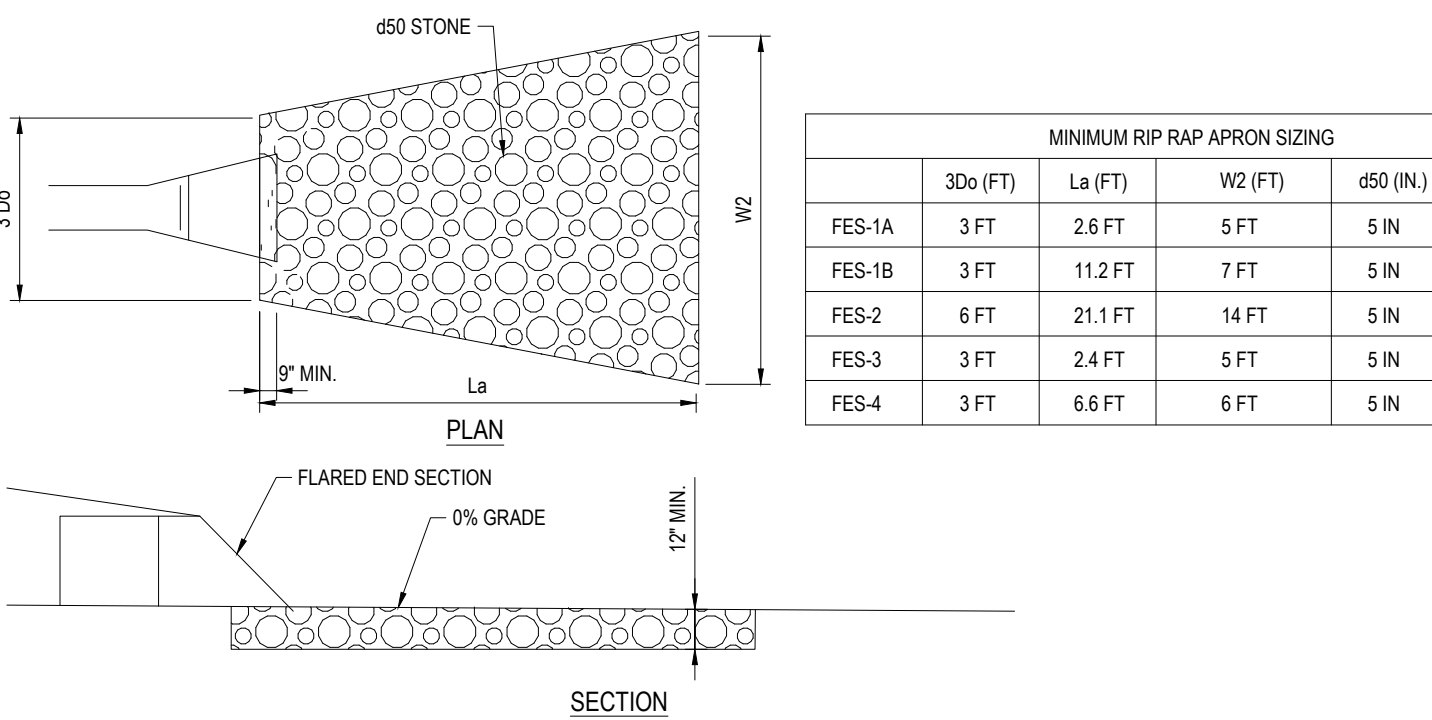
AREA DRAIN

N.T.S.



TYP. REDI-ROCK FENCE CONNECTION OPTIONS

N.T.S.



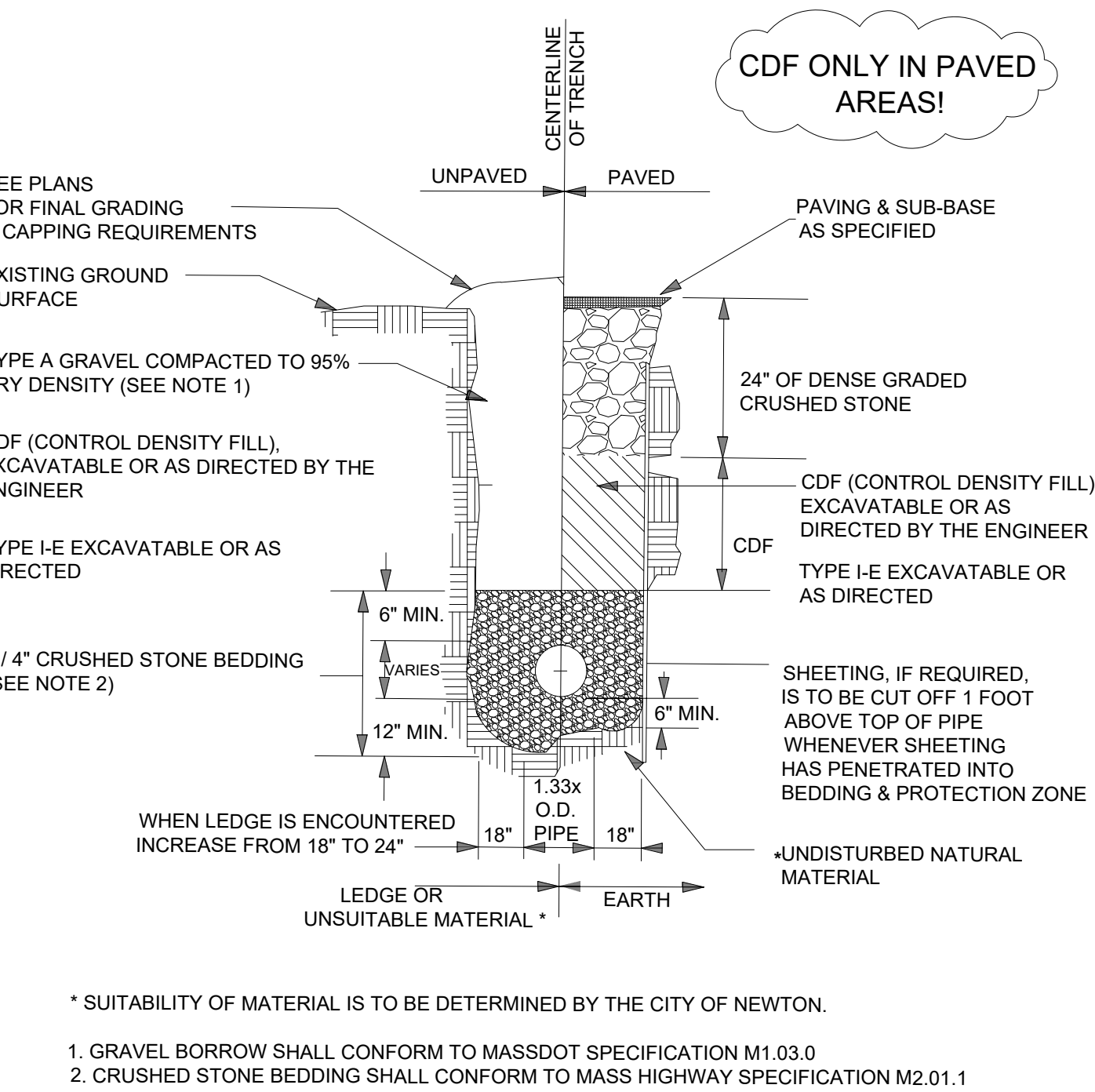
FLARED END SECTION WITH RIP RAP

These generic pedestrian guard and fence details show a few potential options for their installation on the top of a Redi-Rock retaining wall. It is the design engineer's responsibility to fully design and detail the connection of the guard posts to the retaining wall blocks and assure acceptable resistance to the applied forces. Redi-Rock blocks are plain concrete, without steel reinforcement.

NOTE: CONTRACTOR TO PROVIDE FLANGE-EDGE CAP ON ALL WALLS

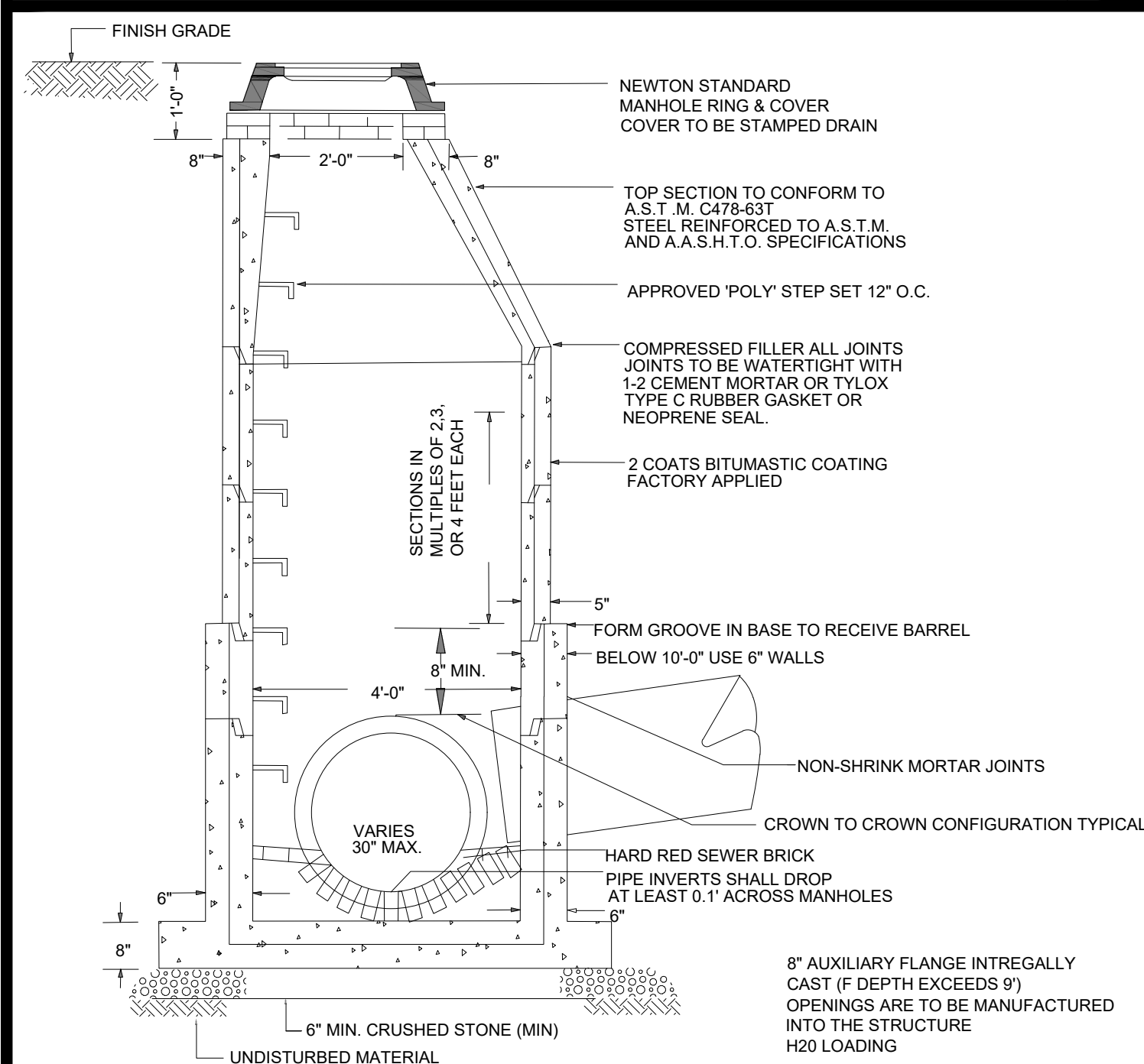
NOTE: CONTRACTOR TO PROVIDE SHOP DRAWINGS, STAMPED BY A PROFESSIONAL ENGINEER, FOR APPROVAL. EQUIVALENT WALL DESIGN, AS APPROVED BY PROFESSIONAL SITE ENGINEER, IS ACCEPTABLE FOR THIS APPLICATION.

N.T.S.



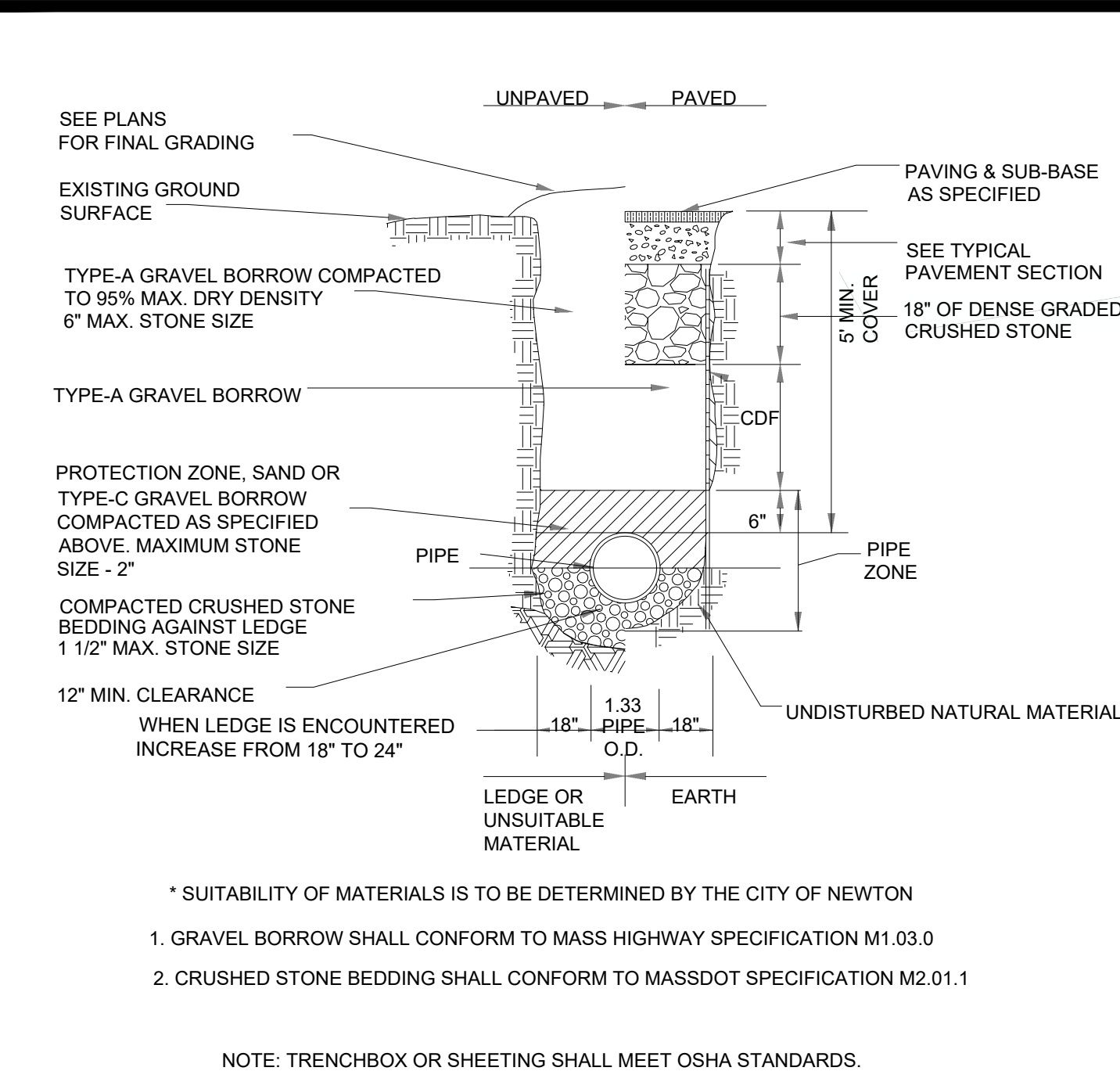
GRAVITY SEWER TRENCH DETAIL (CITY OF NEWTON)

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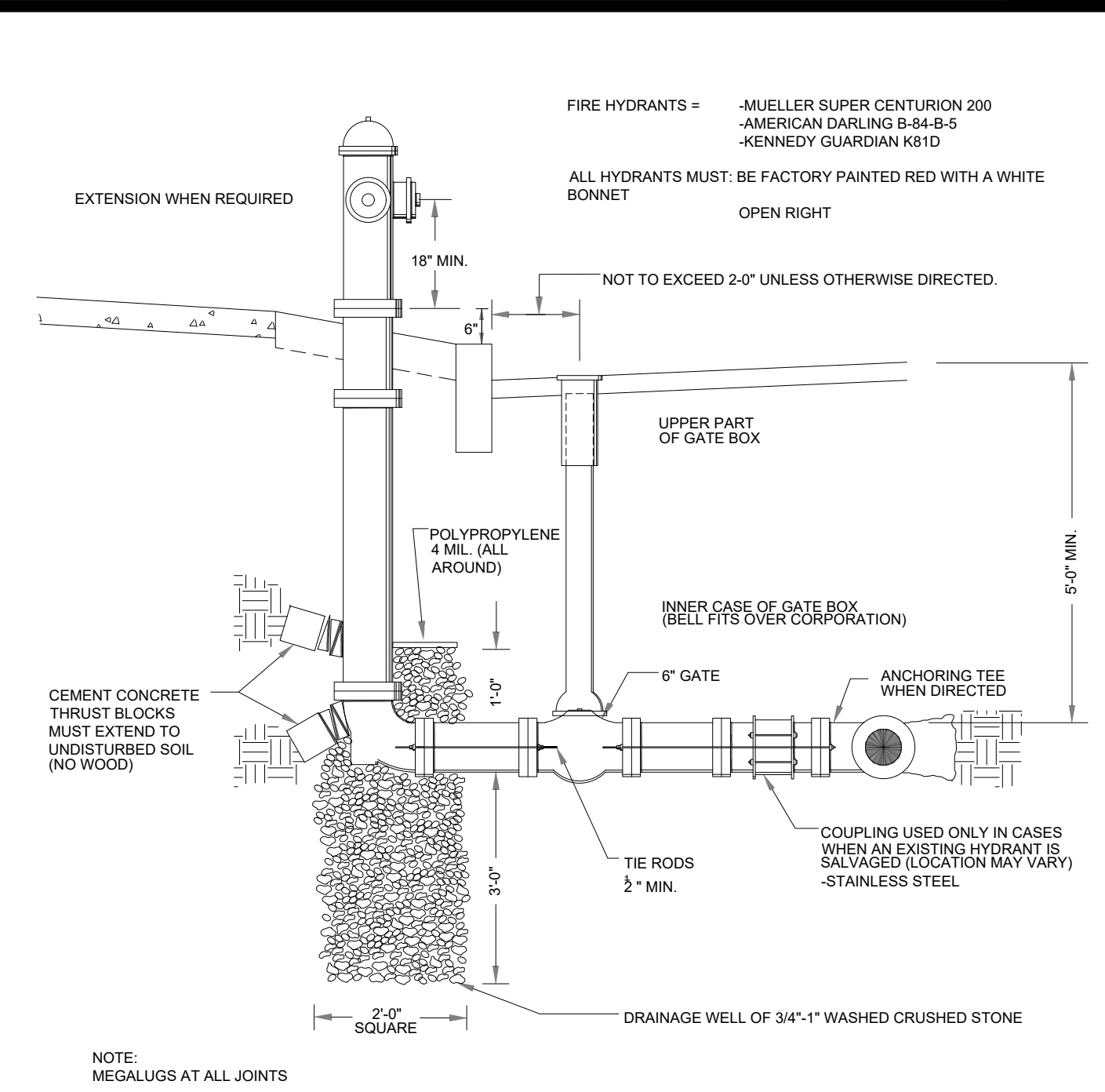
PRECAST CEMENT CONCRETE DRAIN MANHOLE (CITY OF NEWTON)

N.T.S.



TYPICAL WATER TRENCH DETAIL (CITY OF NEWTON)

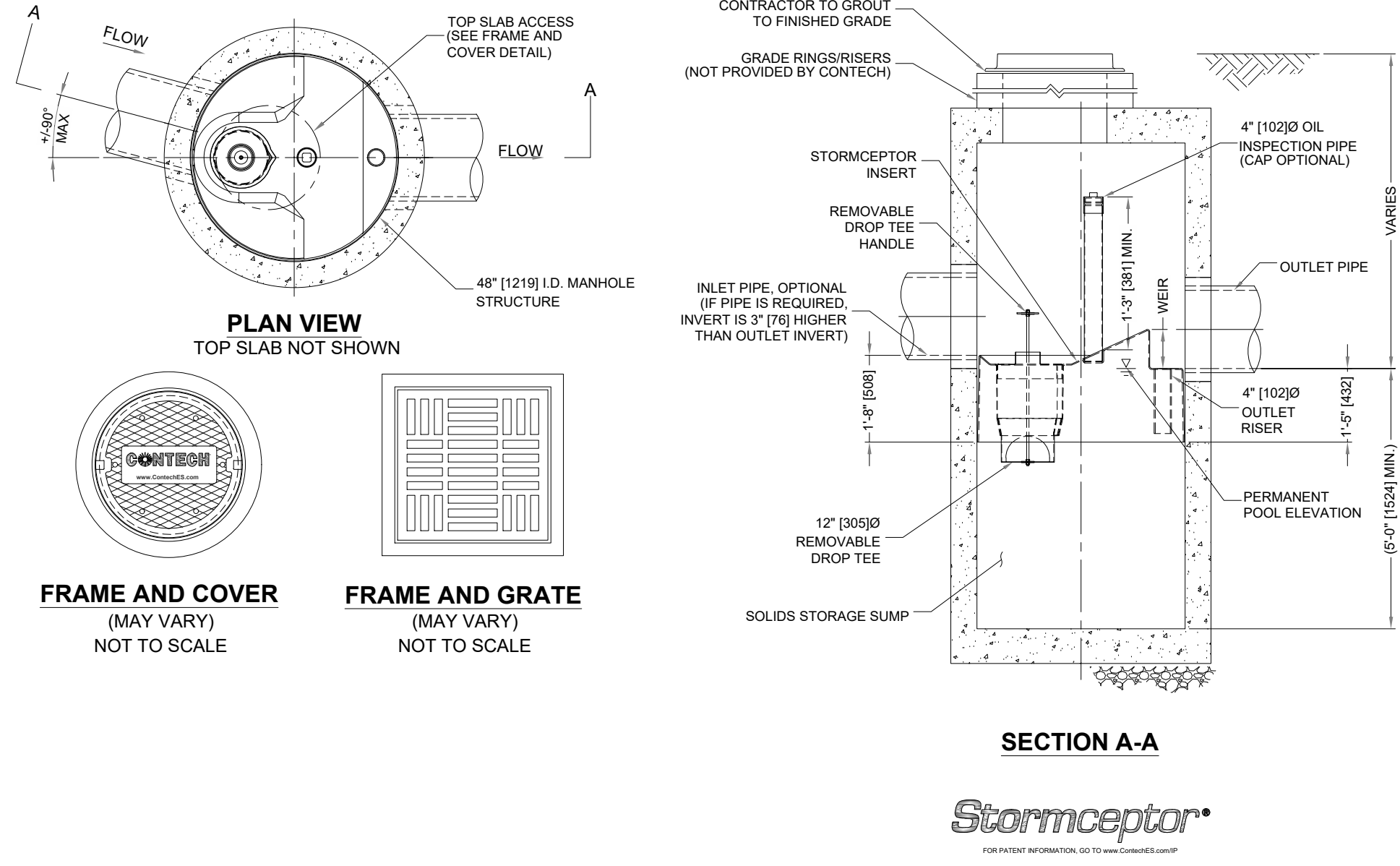
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HYDRANT (CITY OF NEWTON)

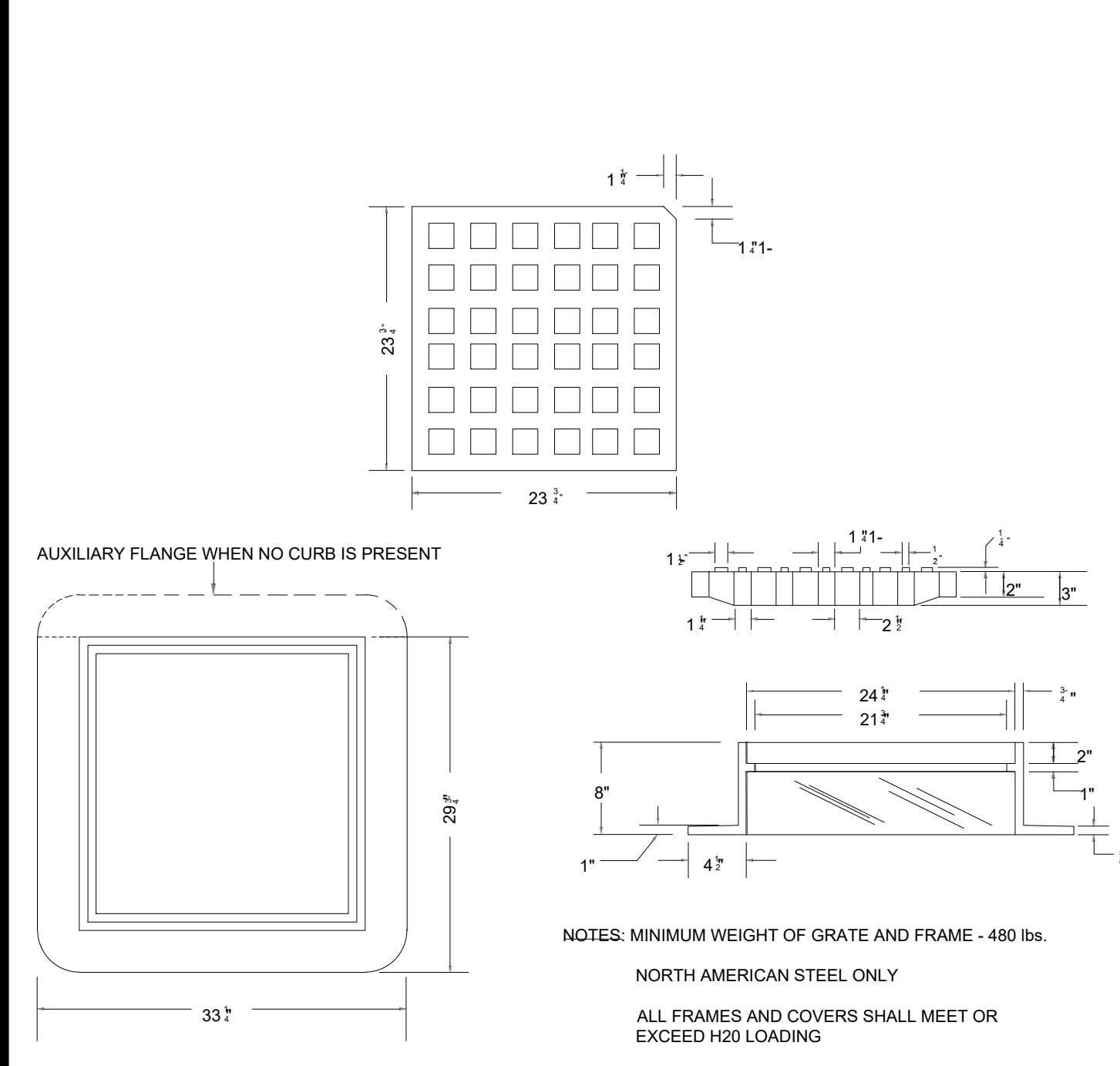
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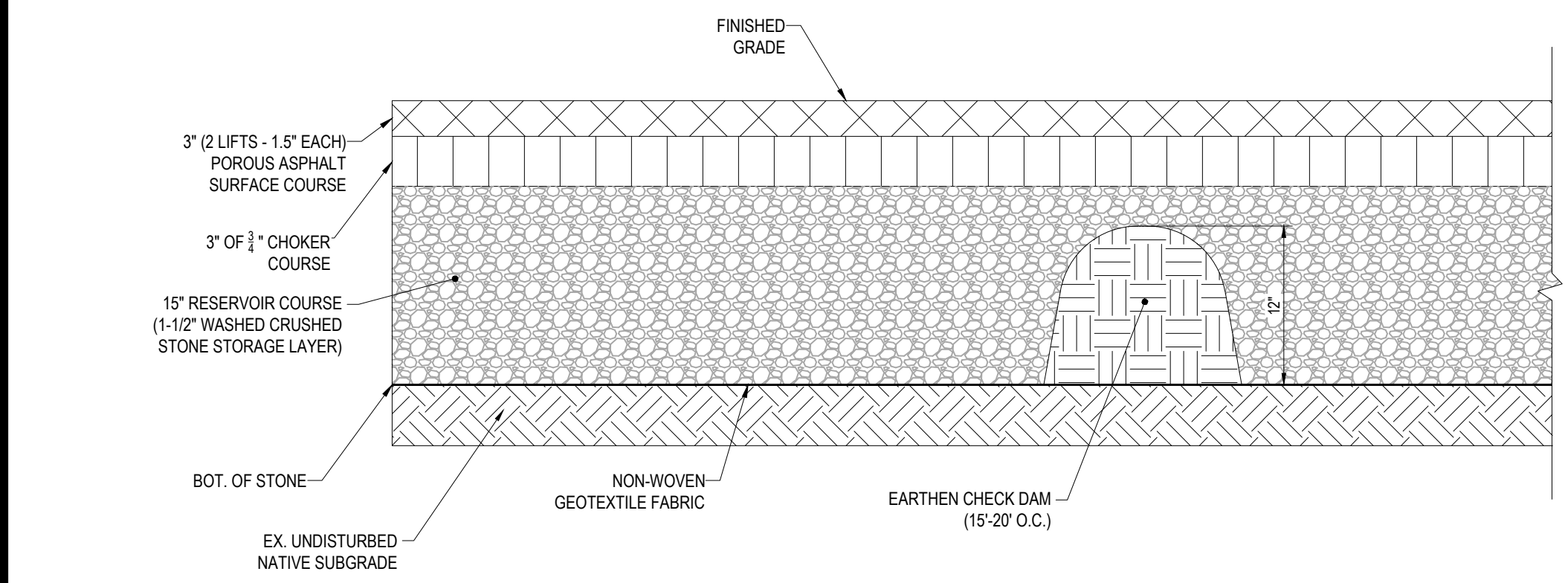
CONTECH STORMCEPTOR 450i (UNIT: CB-1, CB-2, WQI-1, WQI-2, & WQI-3)

N.T.S.



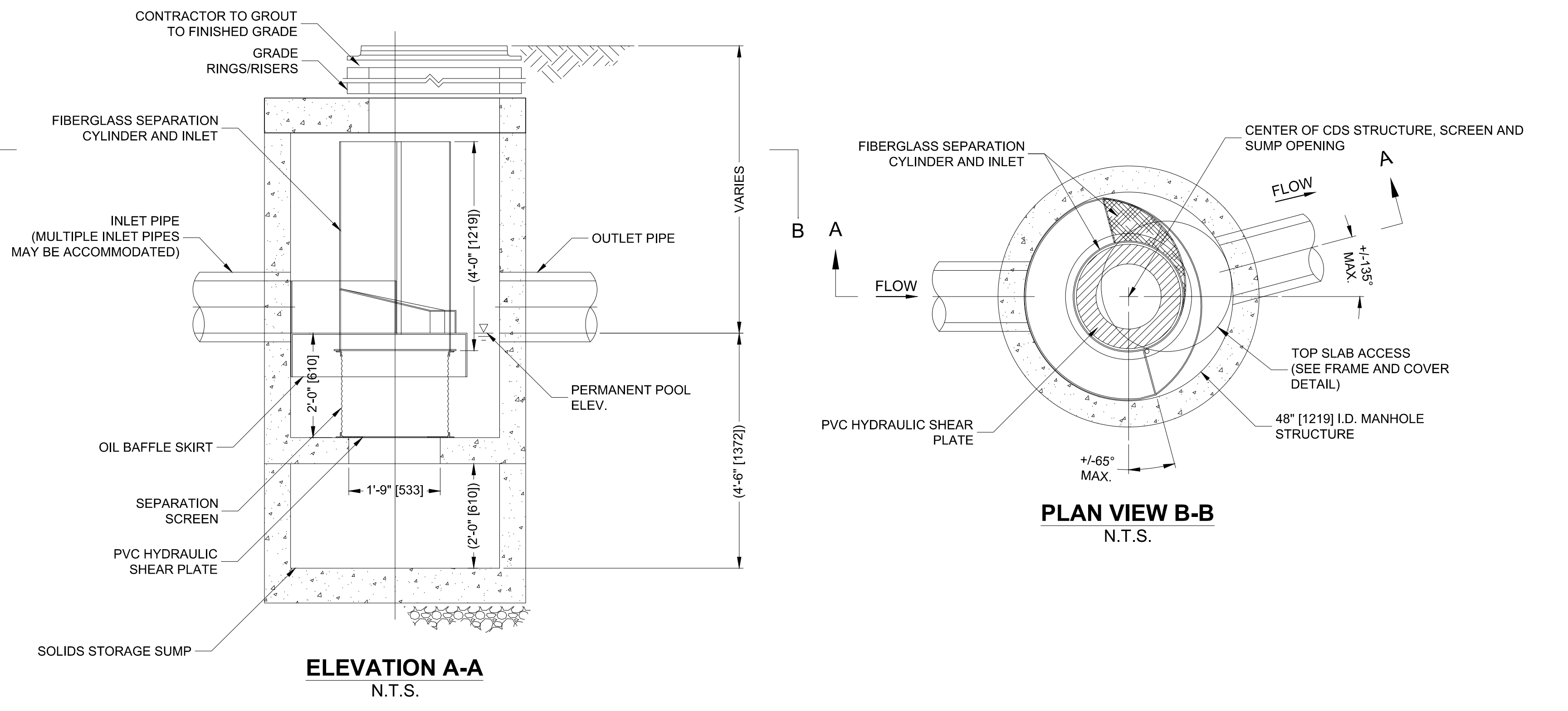
SINGLE CATCH BASIN GRATE AND FRAME (CITY OF NEWTON)

N.T.S.



- GENERAL NOTES FOR POROUS PAVEMENT SYSTEMS:**
- NOTIFY ENGINEER AND OWNER AT LEAST 48 HOURS BEFORE ALL POROUS PAVING WORK.
 - EXISTING SUBGRADE UNDER BED AREA SHALL NOT BE COMPACTED OR SUBJECT TO CONSTRUCTION EQUIPMENT TRAFFIC PRIOR TO STONE BED PLACEMENT. EXCAVATORS/BACKHOES SHOULD BE USED TO EXCAVATE THE BED AREA SUCH THAT THE EQUIPMENT IS NEVER RUNNING ON EXPOSED BED BOTTOMS. ONLY VERY LOW GROUND PRESSURE (4 PSI OR LESS) EQUIPMENT IS ACCEPTABLE IN THE BED AREAS WHEN EXCAVATION IS WITHIN 1 VERTICAL FOOT OF THE FINAL BED BOTTOM ELEVATION.
 - TAKE ANY AND ALL MEASURES NECESSARY TO TEMPORARILY PREVENT SEDIMENTATION OF THE POROUS PAVEMENT SYSTEMS DURING CONSTRUCTION AND UNTIL THE SITE IS COMPLETELY AND PERMANENTLY STABILIZED.
- POROUS ASPHALT AND CHOKER COURSES SHALL MEET THE FOLLOWING REQUIREMENTS:**
- 3" POROUS ASPHALT - SHALL BE POST-BLENDED PF 64-28 SBR WITH 5 POUNDS OF FIBER PER TON OF ASPHALT MIX
- 3/4" = 100%
 - 1/2" = 85-100%
 - 3/8" = 55-75%
 - #4 = 10-25%
 - #8 = 5-10%
 - #200 = 2-4%
 - AIR VOID CONTENT = 16-22%
- 3" CHOKER COURSE - SHALL MEET THE FOLLOWING REQUIREMENTS:
- 1-1/2" = 100%
 - 1" = 95 - 100%
 - 1/2" = 25-60%
 - #4 = 0-10%
 - #8 = 0-5%
 - 95% COMPACTION

POROUS ASPHALT WALK (5P)



CONTECH CDS 2015-4 (UNIT: WQU-1 & WQU-2)

N.T.S.

REVISIONS

REV	DATE	COMMENT	CHECKED BY
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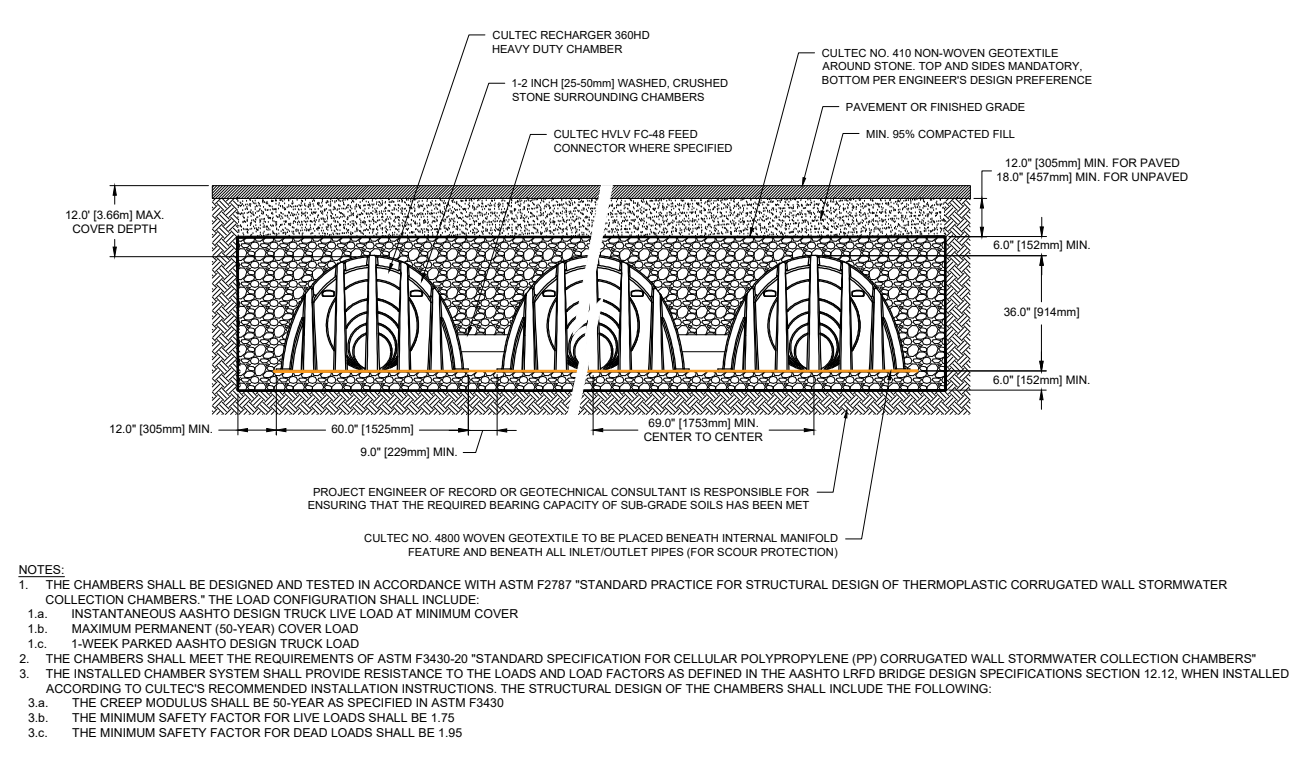
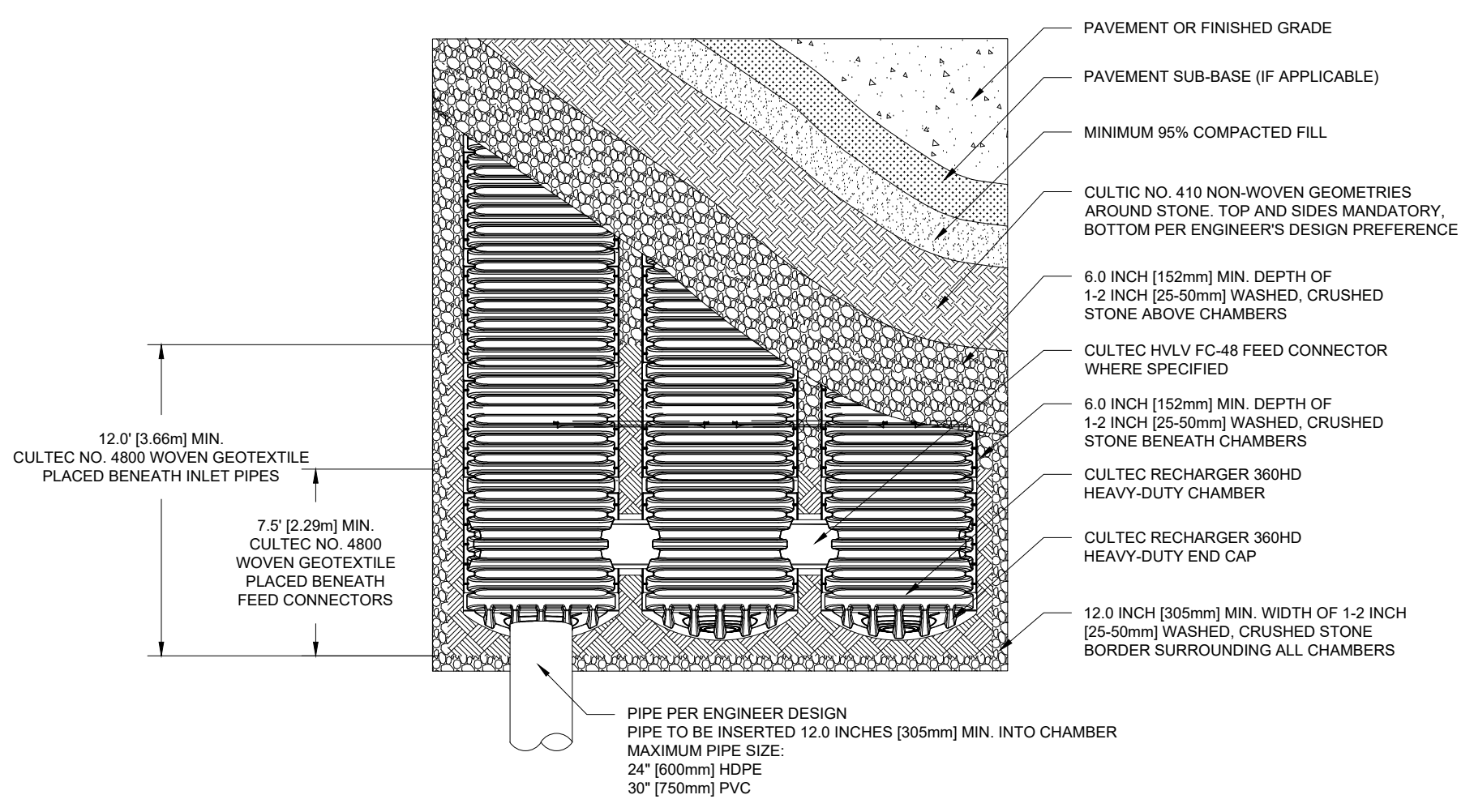
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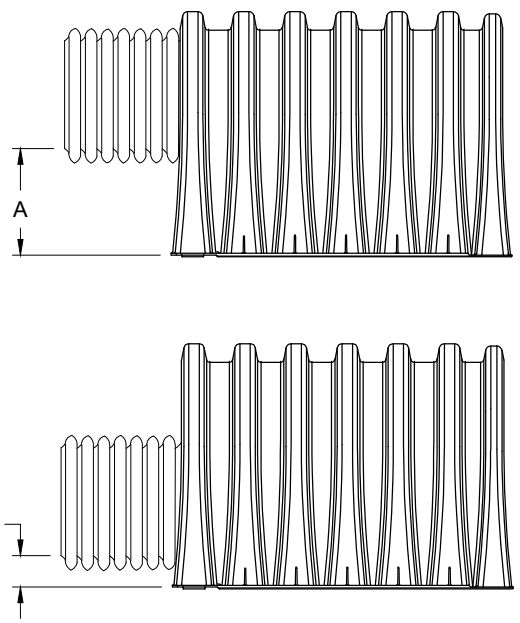
COMMONWEALTH OF MASSACHUSETTS
TIMOTHY A. HAYES
NO. 51929
REGISTERED PROFESSIONAL ENGINEER

SHEET TITLE:
DETAIL SHEET
SHEET NUMBER:
C-703
REVISION 6 - 11/08/2024

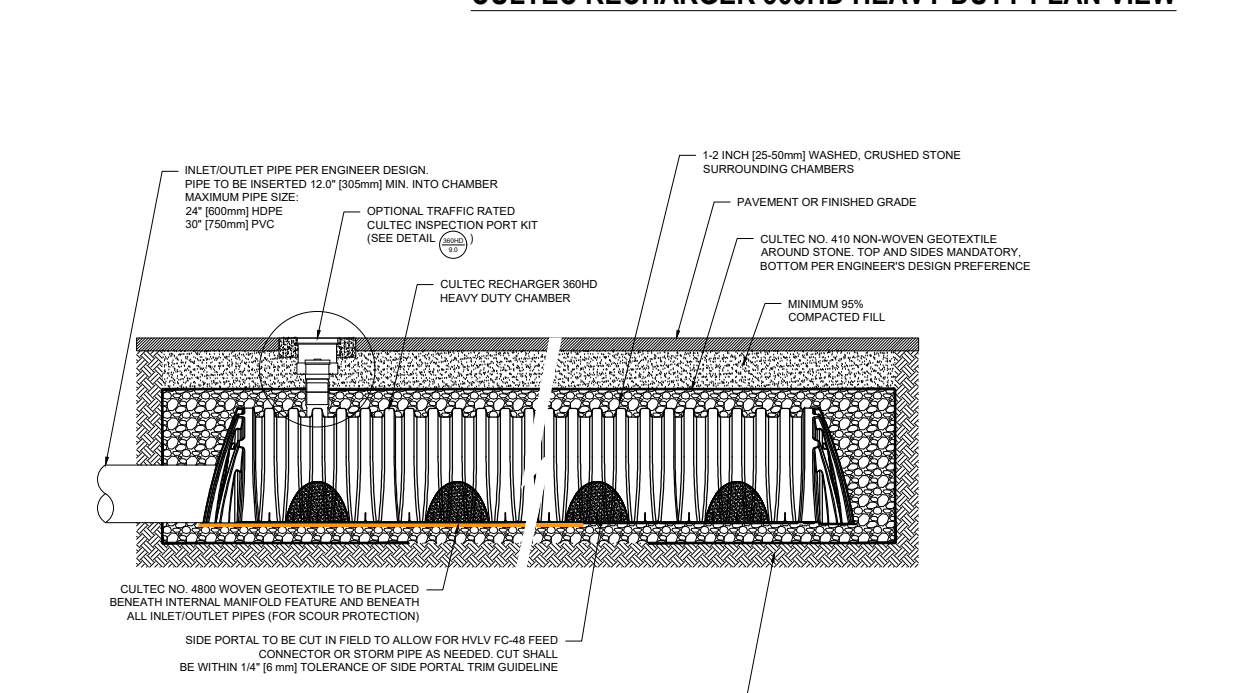
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PIPE	A	B
6" [150 mm]	26.00" [660 mm]	0.75" [20 mm]
8" [200 mm]	24.00" [600 mm]	1.00" [25 mm]
10" [250 mm]	21.00" [525 mm]	1.25" [32 mm]
12" [300 mm]	18.00" [450 mm]	1.75" [45 mm]
15" [375 mm]	15.00" [375 mm]	2.00" [50 mm]
18" [450 mm]	12.00" [300 mm]	2.25" [58 mm]
24" [600 mm]	6.00" [150 mm]	2.50" [64 mm]



THE TYPICAL INVERT TABLE ABOVE IS BASED ON THE INSIDE DIAMETER OF STANDARD CORRUGATED PLASTIC PIPE. THE HEAVY DUTY END CAP HAS PRE-MARKED TRIM LINES FOR PIPE DIAMETERS 12" (300mm), 15" (375mm), 18" (450mm) AND 24" (600mm). PIPES OF ANY SIZE AND MATERIAL UP TO 24" (600mm) MAY BE PLACED AT CUSTOM LOCATIONS AND CUSTOM INVERTS. 30" (750 mm) SMOOTH-WALL SDR-35 PVC PIPE MAY BE USED AT THE BOTTOM OF THE END CAP. THE CROWN OF THE PIPE MUST REMAIN A MINIMUM OF 3" (75mm) FROM THE EDGE OF THE HEAVY DUTY END CAP.



PROJECT CHAMBER OR RECHARGER GEOTECHNICAL CONSULTANT IS RESPONSIBLE FOR ENSURING THAT THE REQUIRED BEARING CAPACITY OF SUBGRADE SOIL HAS BEEN MET.

- THE CHAMBERS SHALL BE DESIGNED AND TESTED IN ACCORDANCE WITH ASTM F277 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". THE LOAD CONFIGURATION SHALL INCLUDE:
 - INSTANTANEOUS AASHTO DESIGN TRUCK LOAD AT MINIMUM COVER
 - MAXIMUM PERMANENT (50-YEAR) COVER LOAD
- THE CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F3430 "STANDARD SPECIFICATION FOR CELLULAR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- THE INSTALLED CHAMBER SYSTEM SHALL PROVIDE RESISTANCE TO THE LOADS AND LOAD FACTORS AS DEFINED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS SECTION 12.12, WHEN INSTALLED ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS. THE STRUCTURAL DESIGN OF THE CHAMBERS SHALL INCLUDE THE FOLLOWING:
 - THE CREEP MODULUS SHALL BE 50-YEAR AS SPECIFIED IN ASTM F3430
 - THE MINIMUM SAFETY FACTOR FOR LIVE LOADS SHALL BE 1.75
 - THE MINIMUM SAFETY FACTOR FOR DEAD LOADS SHALL BE 1.95

CULTEC RECHARGER® 360HD PRODUCT SPECIFICATIONS

GENERAL
 CULTEC RECHARGER® 360HD CHAMBERS ARE DESIGNED FOR UNDERGROUND STORMWATER MANAGEMENT. THE CHAMBERS MAY BE USED FOR RETENTION, RECHARGING, DETENTION OR CONTROLLING THE FLOW OF ON-SITE STORMWATER RUNOFF.

- CHAMBER PARAMETERS**
- THE CHAMBERS SHALL BE MANUFACTURED IN THE U.S.A. OR CANADA BY CULTEC, INC. OF BROOKFIELD, CT. (203-775-4416 OR 1-800-428-5832)
 - THE CHAMBERS SHALL BE DESIGNED AND TESTED IN ACCORDANCE WITH ASTM F277 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". THE LOAD CONFIGURATION SHALL INCLUDE:
 - INSTANTANEOUS AASHTO DESIGN TRUCK LIVE LOAD AT MINIMUM COVER
 - MAXIMUM PERMANENT (50-YEAR) COVER LOAD
 - 1-WEEK PARKED AASHTO DESIGN TRUCK LOAD
 - THE CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F3430 "STANDARD SPECIFICATION FOR CELLULAR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
 - THE CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F3430 "STANDARD SPECIFICATION FOR CELLULAR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". THE LOAD CONFIGURATION SHALL INCLUDE:
 - INSTANTANEOUS AASHTO DESIGN TRUCK LIVE LOAD AT MINIMUM COVER
 - MAXIMUM PERMANENT (50-YEAR) COVER LOAD
 - THE INSTALLED CHAMBER SYSTEM SHALL PROVIDE RESISTANCE TO THE LOADS AND LOAD FACTORS AS DEFINED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS SECTION 12.12, WHEN INSTALLED ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS. THE STRUCTURAL DESIGN OF THE CHAMBERS SHALL INCLUDE THE FOLLOWING:
 - THE CREEP MODULUS SHALL BE 50-YEAR AS SPECIFIED IN ASTM F3430
 - THE MINIMUM SAFETY FACTOR FOR LIVE LOADS SHALL BE 1.75
 - THE MINIMUM SAFETY FACTOR FOR DEAD LOADS SHALL BE 1.95
 - THE CHAMBER SHALL BE STRUCTURAL FOAM INJECTION MOLDED OF BLUE VIRGIN HIGH MOLECULAR WEIGHT IMPACT-MODIFIED POLYPROPYLENE.
 - THE CHAMBER SHALL BE ARCHED IN SHAPE.
 - THE CHAMBER SHALL BE OPEN-BOTTOMED.
 - THE CHAMBER SHALL BE JOINED USING AN INTERLOCKING OVERLAPPING RIB METHOD. CONNECTIONS MUST BE FULLY SHOULDERED OVERLAPPING RIBS, HAVING NO SEPARATE COUPLINGS.
 - THE NOMINAL CHAMBER DIMENSIONS OF THE CULTEC RECHARGER® 360HD SHALL BE 36 INCHES (915 mm) TALL, 60 INCHES (1525 mm) WIDE AND 50 INCHES (1275 mm) LONG. THE INSTALLED LENGTH OF A JOINED RECHARGER® 360HD SHALL BE 3.67 FEET (1.12 m).
 - MULTIPLE CHAMBERS MAY BE CONNECTED TO FORM DIFFERENT LENGTH ROWS. EACH ROW SHALL BEGIN AND END WITH A SEPARATELY FORMED CULTEC RECHARGER® 360HD END CAP. MAXIMUM INLET OPENING ON THE END CAP IS 24 INCH (600 mm) HDPE OR 30 INCH (750mm) PVC.
 - THE CHAMBER SHALL HAVE TWO SIDE PORTALS TO ACCEPT CULTEC HVLV™ FC-48 FEED CONNECTORS TO CREATE AN INTERNAL MANIFOLD. MAXIMUM ALLOWABLE PIPE SIZE IN THE SIDE PORTAL IS 10 INCH (250mm) HDPE OR 12 INCH (300mm) PVC.
 - THE NOMINAL CHAMBER DIMENSIONS OF THE CULTEC HVLV™ FC-48 FEED CONNECTOR SHALL BE 12 INCHES (305 mm) TALL, 16 INCHES (406 mm) WIDE AND 49 INCHES (1245 mm) LONG.
 - THE NOMINAL STORAGE VOLUME OF THE RECHARGER® 360HD CHAMBER SHALL BE 10.0 FT³ / FT (528 m³ / m) - WITHOUT STONE. THE NOMINAL STORAGE VOLUME OF A JOINED RECHARGER® 360HD SHALL BE 36.66 FT³ / UNIT (1.038 m³ / UNIT) - WITHOUT STONE.
 - THE NOMINAL STORAGE VOLUME OF THE HVLV™ FC-48 FEED CONNECTOR SHALL BE 0.913 FT³ / FT (0.085 m³ / UNIT) - WITHOUT STONE.
 - THE RECHARGER® 360HD CHAMBER SHALL HAVE 7 CORRUGATIONS.
 - THE CHAMBER SHALL BE MANUFACTURED IN A FACILITY EMPLOYING CULTEC'S QUALITY CONTROL AND ASSURANCE PROCEDURES.
 - MAXIMUM ALLOWABLE COVER OVER THE TOP OF THE CHAMBER SHALL BE 12.0 FEET (3.66 m).

END CAP PARAMETERS

- THE CULTEC RECHARGER® 360HD END CAP (REFERRED TO AS 'END CAP') SHALL BE MANUFACTURED IN THE U.S.A. OR CANADA BY CULTEC, INC. OF BROOKFIELD, CT. (203-775-4416 OR 1-800-428-5832)
- THE END CAP SHALL BE STRUCTURAL FOAM INJECTION MOLDED OF BLUE VIRGIN HIGH MOLECULAR WEIGHT IMPACT-MODIFIED POLYPROPYLENE.
- THE END CAP SHALL BE ARCHED IN SHAPE.
- THE END CAP SHALL BE OPEN-BOTTOMED.
- THE END CAP SHALL BE JOINED AT THE BEGINNING AND END OF EACH ROW OF CHAMBERS USING AN INTERLOCKING OVERLAPPING RIB METHOD. CONNECTIONS MUST BE FULLY SHOULDERED OVERLAPPING RIBS, HAVING NO SEPARATE COUPLINGS.
- THE END CAP SHALL HAVE 5 CORRUGATIONS.
- THE NOMINAL DIMENSIONS OF THE END CAP SHALL BE 36.5 INCHES (927 mm) TALL, 60 INCHES (1525 mm) WIDE AND 18 INCHES (458 mm) LONG. WHEN JOINED WITH A RECHARGER 360HD CHAMBER, THE INSTALLED LENGTH OF THE END CAP SHALL BE 15 INCHES (381 mm).
- THE NOMINAL STORAGE VOLUME OF THE END CAP SHALL BE 5.17 FT³ / FT (0.48 m³ / m) - WITHOUT STONE. THE NOMINAL STORAGE VOLUME OF AN INTERLOCKED END CAP SHALL BE 6.46 FT³ / UNIT (0.183 m³ / UNIT) - WITHOUT STONE.
- MAXIMUM INLET OPENING ON THE END CAP IS 24 INCH (600 mm) HDPE OR 30 INCH (750mm) PVC.
- THE CHAMBER SHALL BE MANUFACTURED IN A FACILITY EMPLOYING CULTEC'S QUALITY CONTROL AND ASSURANCE PROCEDURES
- THE END CAP SHALL PROVIDE RESISTANCE TO THE LOADS AND LOAD FACTORS AS DEFINED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS SECTION 12.12.

CULTEC HVLV FC-48 FEED CONNECTOR PRODUCT SPECIFICATIONS

GENERAL
 CULTEC HVLV FC-48 FEED CONNECTORS ARE DESIGNED TO CREATE AN INTERNAL MANIFOLD FOR CULTEC RECHARGER MODEL 360HD STORMWATER CHAMBERS.

- FEED CONNECTOR PARAMETERS**
- THE FEED CONNECTOR SHALL BE MANUFACTURED BY CULTEC, INC. OF BROOKFIELD, CT. (203-775-4416 OR 1-800-428-5832)
 - THE FEED CONNECTOR SHALL BE VACUUM THERMOFORMED OF BLACK HIGH MOLECULAR WEIGHT HIGH DENSITY POLYETHYLENE (HMWHDPE).
 - THE FEED CONNECTOR SHALL BE ARCHED IN SHAPE.
 - THE FEED CONNECTOR SHALL BE OPEN-BOTTOMED.
 - THE NOMINAL DIMENSIONS OF THE CULTEC HVLV FC-48 FEED CONNECTOR SHALL BE 12 INCHES (305 mm) TALL, 16 INCHES (406 mm) WIDE AND 49 INCHES (1245 mm) LONG.
 - THE NOMINAL STORAGE VOLUME OF THE HVLV FC-48 FEED CONNECTOR SHALL BE 0.913 FT³ / FT (0.085 m³ / m) - WITHOUT STONE.
 - THE HVLV FC-48 FEED CONNECTOR SHALL HAVE 4 CORRUGATIONS.
 - THE HVLV FC-48 FEED CONNECTOR MUST BE FORMED AS A WHOLE UNIT HAVING TWO OPEN END WALLS AND HAVING NO SEPARATE END PLATES OR SEPARATE END WALLS. THE UNIT SHALL FIT INTO THE SIDE PORTALS OF THE CULTEC RECHARGER STORMWATER CHAMBER AND ACT AS CROSS FEED CONNECTIONS CREATING AN INTERNAL MANIFOLD.
 - THE FEED CONNECTOR SHALL BE DESIGNED TO WITHSTAND AASHTO HS-20 DEFINED LOADS WHEN INSTALLED ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS.
 - THE FEED CONNECTOR SHALL BE MANUFACTURED IN AN ISO 9001:2008 CERTIFIED FACILITY.

CULTEC NO. 410" NON-WOVEN GEOTEXTILE
 CULTEC NO. 410" NON-WOVEN GEOTEXTILE MAY BE USED WITH CULTEC CONTACTOR® AND RECHARGER® STORMWATER INSTALLATIONS TO PROVIDE A BARRIER THAT PREVENTS SOIL INTRUSION INTO THE STONE.

- GEOTEXTILE PARAMETERS**
- THE GEOTEXTILE SHALL BE PROVIDED BY CULTEC, INC. OF BROOKFIELD, CT. (203-775-4416 OR 1-800-428-5832)
 - THE GEOTEXTILE SHALL BE BLACK IN APPEARANCE.
 - THE GEOTEXTILE SHALL HAVE A TYPICAL WEIGHT OF 4.5 OZ/SY (142 G/M).
 - THE GEOTEXTILE SHALL HAVE A TENSILE STRENGTH VALUE OF 120 LBS (533 N) PER ASTM D4632 TESTING METHOD.
 - THE GEOTEXTILE SHALL HAVE AN ELONGATION @ BREAK VALUE OF 50% PER ASTM D4632 TESTING METHOD.
 - THE GEOTEXTILE SHALL HAVE A PULLEN BURST VALUE OF 225 PSI (1551 KPA) PER ASTM D3786 TESTING METHOD.
 - THE GEOTEXTILE SHALL HAVE A TENSILE STRENGTH VALUE OF 65 LBS (289 N) PER ASTM D4833 TESTING METHOD.
 - THE GEOTEXTILE SHALL HAVE A CBR PUNCTURE VALUE OF 340 LBS (1513 N) PER ASTM D6241 TESTING METHOD.
 - THE GEOTEXTILE SHALL HAVE A TRAPEZOID TEAR VALUE OF 50 LBS (222 N) PER ASTM D4533 TESTING METHOD.
 - THE GEOTEXTILE SHALL HAVE A AOS VALUE OF 70 U.S. SIEVE (0.212 MM) PER ASTM D4751 TESTING METHOD.
 - THE GEOTEXTILE SHALL HAVE A PERMITTIVITY VALUE OF 1.7 SEC-1 PER ASTM D4491 TESTING METHOD.
 - THE GEOTEXTILE SHALL HAVE A WATER FLOW RATE VALUE OF 135 GAL/MIN/SF (5500 L/MIN/SQ) PER ASTM D4491 TESTING METHOD.
 - THE GEOTEXTILE SHALL HAVE A UV STABILITY @ 500 HOURS VALUE OF 70% PER ASTM D4355 TESTING METHOD.

CULTEC NO. 4800" WOVEN GEOTEXTILE
 CULTEC NO. 4800" WOVEN GEOTEXTILE IS DESIGNED AS A UNDERLAYMENT TO PREVENT SCOURING CAUSED BY WATER MOVEMENT WITHIN THE CULTEC CHAMBERS AND FEED CONNECTORS UTILIZING THE CULTEC MANIFOLD FEATURE. IT MAY ALSO BE USED AS A COMPONENT OF THE CULTEC SEPARATOR ROW TO ACT AS A BARRIER TO PREVENT SOIL/CONTAMINANT INTRUSION INTO THE STONE WHILE ALLOWING FOR MAINTENANCE.

- GEOTEXTILE PARAMETERS**
- THE GEOTEXTILE SHALL BE PROVIDED BY CULTEC, INC. OF BROOKFIELD, CT. (203-775-4416 OR 1-800-428-5832)
 - THE GEOTEXTILE SHALL BE BLACK IN APPEARANCE.
 - THE GEOTEXTILE SHALL HAVE A TENSILE STRENGTH OF 550 X 550 LBS (2,448 X 2,448 N) PER ASTM D4632 TESTING METHOD.
 - THE GEOTEXTILE SHALL HAVE AN ELONGATION @ BREAK RESISTANCE OF 20 X 20% PER ASTM D4632 TESTING METHOD.
 - THE GEOTEXTILE SHALL HAVE A WIDE WIDTH TENSILE RESISTANCE OF 5,070 X 5,070 LBS/FT (74 X 74 KN/M) PER ASTM D4595 TESTING METHOD.
 - THE GEOTEXTILE SHALL HAVE A WIDE WIDTH TENSILE RESISTANCE @ 2% STRAIN OF 960 X 1,996 LBS/FT (14 X 16 KN/M) PER ASTM D4595 TESTING METHOD.
 - THE GEOTEXTILE SHALL HAVE A WIDE WIDTH TENSILE RESISTANCE @ 5% STRAIN OF 2,740 X 2,740 LBS/FT (40 X 40 KN/M) PER ASTM D4595 TESTING METHOD.
 - THE GEOTEXTILE SHALL HAVE A WIDE WIDTH TENSILE RESISTANCE @ 10% STRAIN OF 4,800 X 4,800 LBS/FT (70 X 70 KN/M) PER ASTM D4595 TESTING METHOD.
 - THE GEOTEXTILE SHALL HAVE A CBR PUNCTURE RESISTANCE OF 1,700 LBS (7,560 N) PER ASTM D6241 TESTING METHOD.
 - THE GEOTEXTILE SHALL HAVE A TRAPEZOIDAL TEAR RESISTANCE OF 180 X 180 LBS (801 X 801 N) PER ASTM D4533 TESTING METHOD.
 - THE GEOTEXTILE SHALL HAVE AN APPARENT OPENING SIZE OF 40 US STD. SIEVE (0.425 MM) PER ASTM D4751 TESTING METHOD.
 - THE GEOTEXTILE SHALL HAVE A PERMITTIVITY RATING OF 0.15 SEC-1 PER ASTM D4491 TESTING METHOD.
 - THE GEOTEXTILE SHALL HAVE A WATER FLOW RATING OF 11.5 GPM/FT² (470 LPH/M²) PER ASTM D4491 TESTING METHOD.
 - THE GEOTEXTILE SHALL HAVE A UV RESISTANCE OF 80% @ 500 HRS. PER ASTM D4355 TESTING METHOD.

REVISIONS

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1	8/21/2023	REVISED BUILDING DESIGN	TAH
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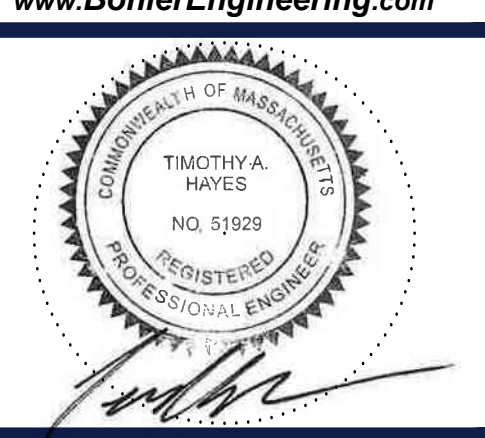
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 DRAWN BY: ACL
 CHECKED BY: TAH
 DATE: 03/01/2023
 CAD ID.: MAB220089.00-SPD-SA

NOTICE OF INTENT APPLICATION FOR TOLL BROTHERS, INC

PROPOSED RESIDENTIAL DEVELOPMENT
 528 BOYLSTON STREET
 CITY OF NEWTON
 MIDDLESEX COUNTY, MA



SHEET TITLE:

DETAIL SHEET

SHEET NUMBER: **C-704**

CULTEC RECHARGER 360HD STORMWATER CHAMBER (2P & 3P)



REVISIONS table with columns for REV, DATE, COMMENT, and DRAWN BY.

811 logo with text: "Know what's below. Call before you dig. ALWAYS CALL 811. It's fast. It's free. It's the law."

PERMIT SET section with text: "THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE."

PROJECT INFO table: PROJECT No., CHECKED BY, DATE, CAD ID.

PROJECT: MAB220089.00-SFPD-SA

NOTICE OF INTENT APPLICATION FOR TOLL BROTHERS, INC.

PROPOSED RESIDENTIAL DEVELOPMENT

528 BOYLSTON STREET CITY OF NEWTON MIDDLESEX COUNTY, MA

BOHLER logo and contact information: 45 FRANKLIN STREET, 5th FLOOR BOSTON, MA 02110. Phone: (617) 849-8040.



SHEET TITLE: DETAIL SHEET

SHEET NUMBER: C-705

REVISION 6 - 11/08/2024

CULTEC RECHARGER 902HD SPECIFICATIONS GENERAL. CULTEC RECHARGER 902HD CHAMBERS ARE DESIGNED FOR UNDERGROUND STORMWATER MANAGEMENT.

CULTEC HVLV FC-48 FEED CONNECTOR PRODUCT SPECIFICATIONS GENERAL. CULTEC HVLV FC-48 FEED CONNECTORS ARE DESIGNED TO CREATE AN INTERNAL MANIFOLD FOR CULTEC RECHARGER MODEL 902HD STORMWATER CHAMBERS.

CULTEC NO. 410 NON-WOVEN GEOTEXTILE. CULTEC NO. 410 NON-WOVEN GEOTEXTILE MAY BE USED WITH CULTEC CONTACTOR AND RECHARGER STORMWATER INSTALLATIONS TO PROVIDE A BARRIER THAT PREVENTS SOIL INTRUSION INTO THE STONE.

CULTEC NO. 4800 WOVEN GEOTEXTILE. CULTEC NO. 4800 WOVEN GEOTEXTILE IS DESIGNED AS AN UNDERLAYMENT TO PREVENT SCOURING CAUSED BY WATER MOVEMENT WITHIN THE CULTEC CHAMBERS AND FEED CONNECTORS.

END CAP PARAMETERS. THE CULTEC RECHARGER 902HD END CAP (REFERRED TO AS 'END CAP') SHALL BE MANUFACTURED IN THE U.S.A. BY CULTEC, INC. OF BROOKFIELD, CT.

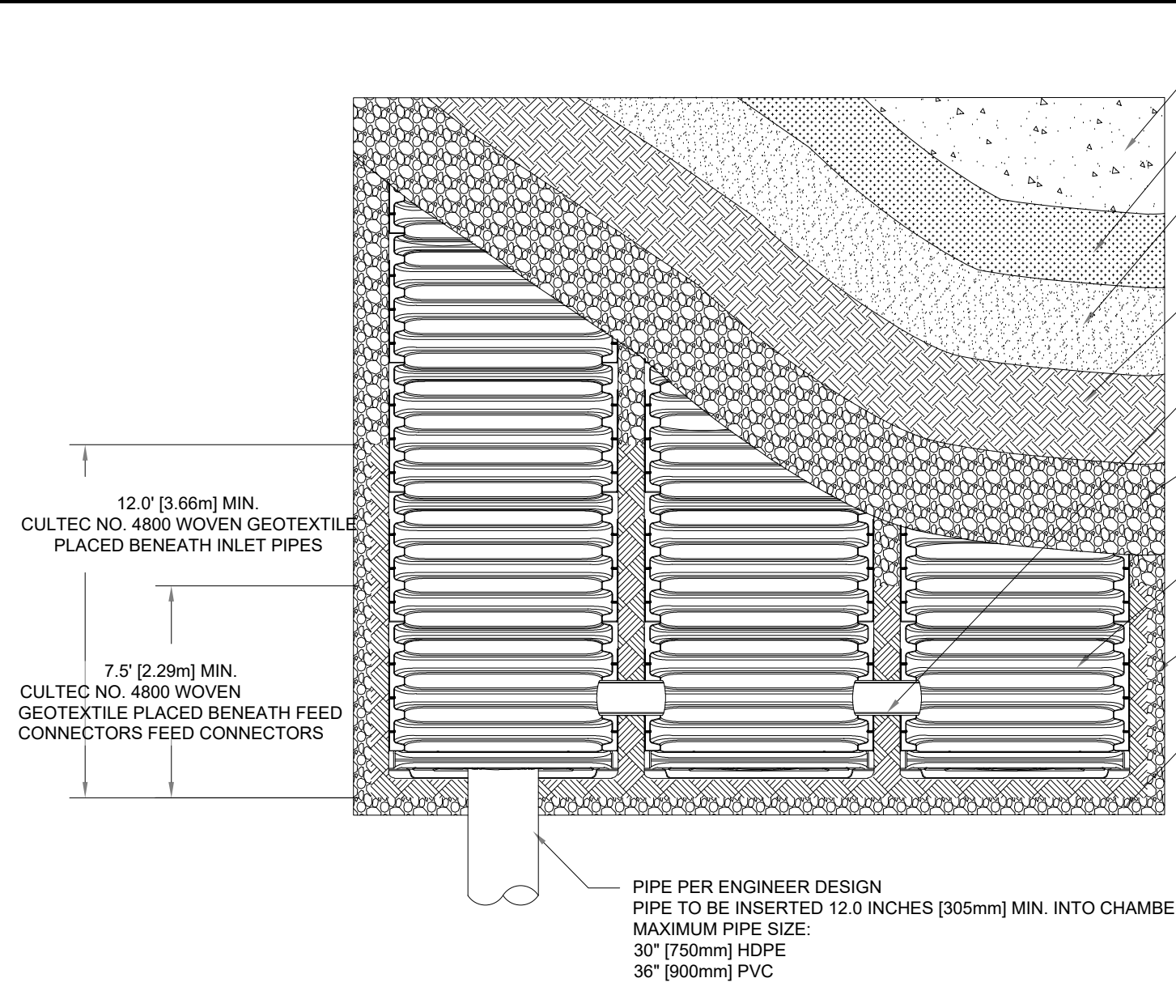
GENERAL NOTES. THE TYPICAL INVERT TABLE ABOVE IS BASED ON THE INSIDE DIAMETER OF STANDARD CORRUGATED PLASTIC PIPE.

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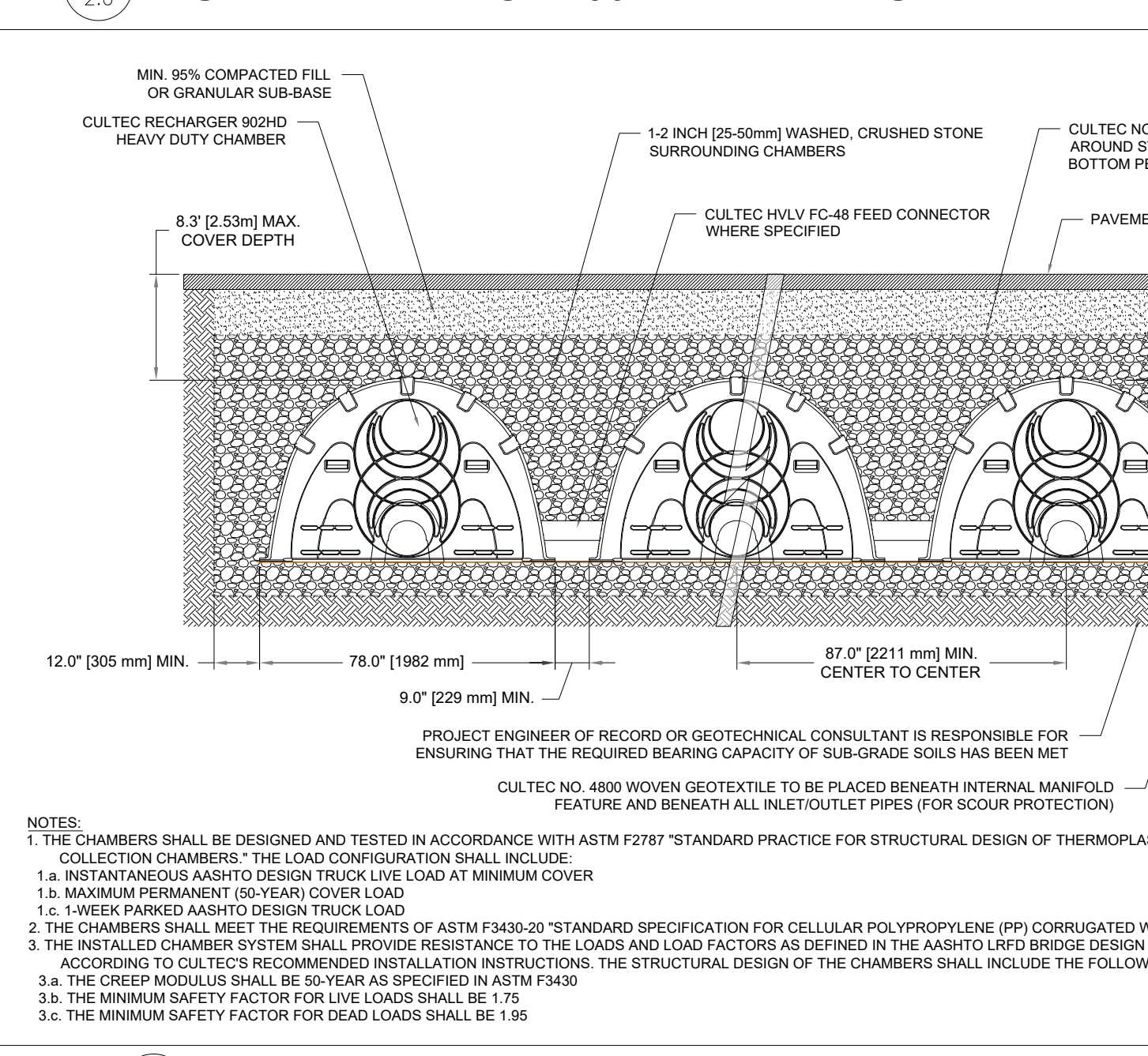
GENERAL NOTES table with columns for PIPE, A, and B.

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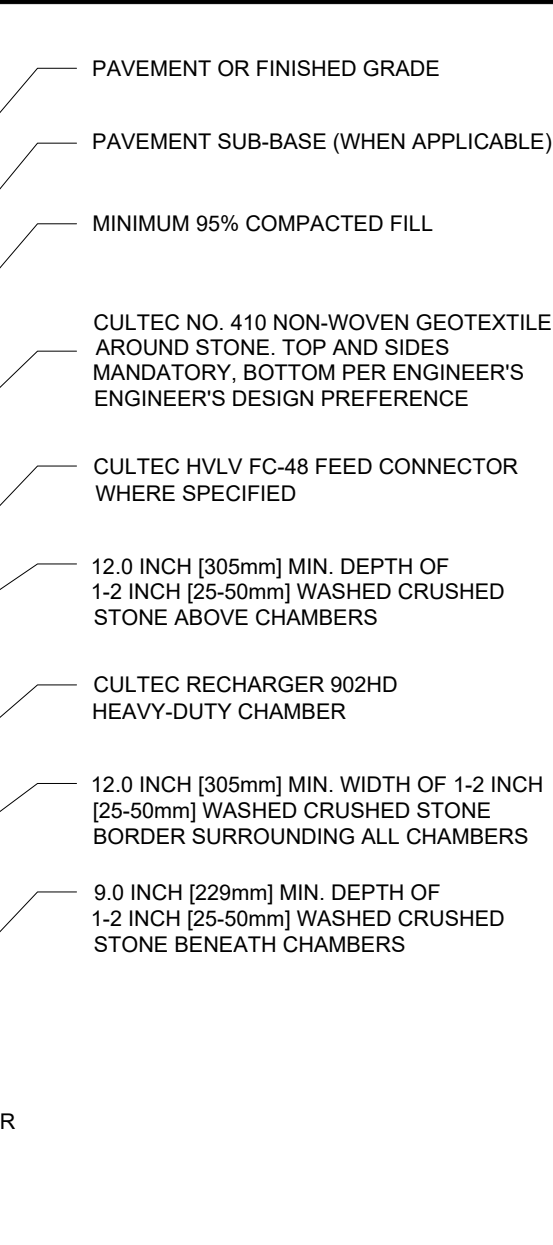
GENERAL NOTES. THE TYPICAL INVERT TABLE ABOVE IS BASED ON THE INSIDE DIAMETER OF STANDARD CORRUGATED PLASTIC PIPE.



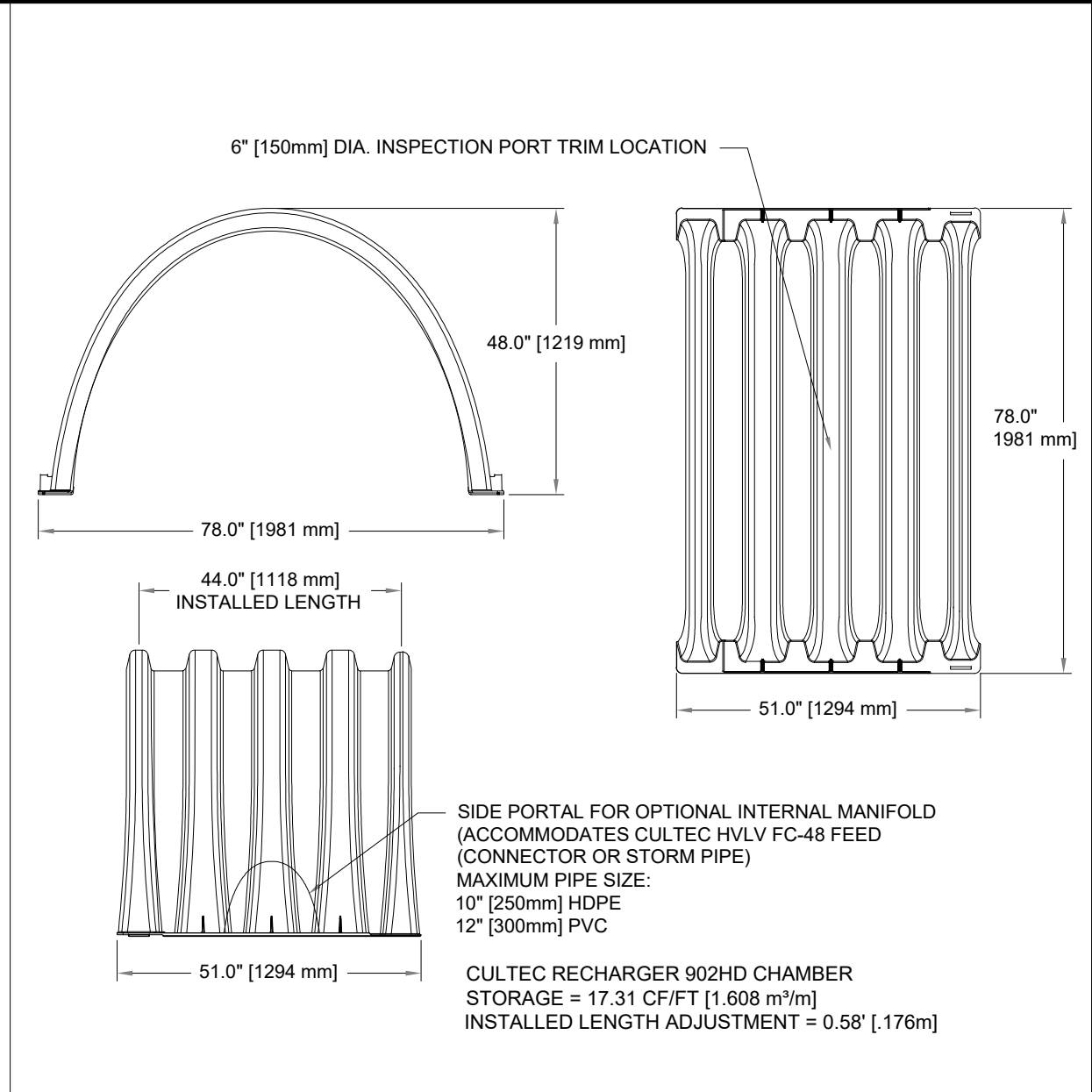
CULTEC RECHARGER 902HD HEAVY DUTY PLAN VIEW



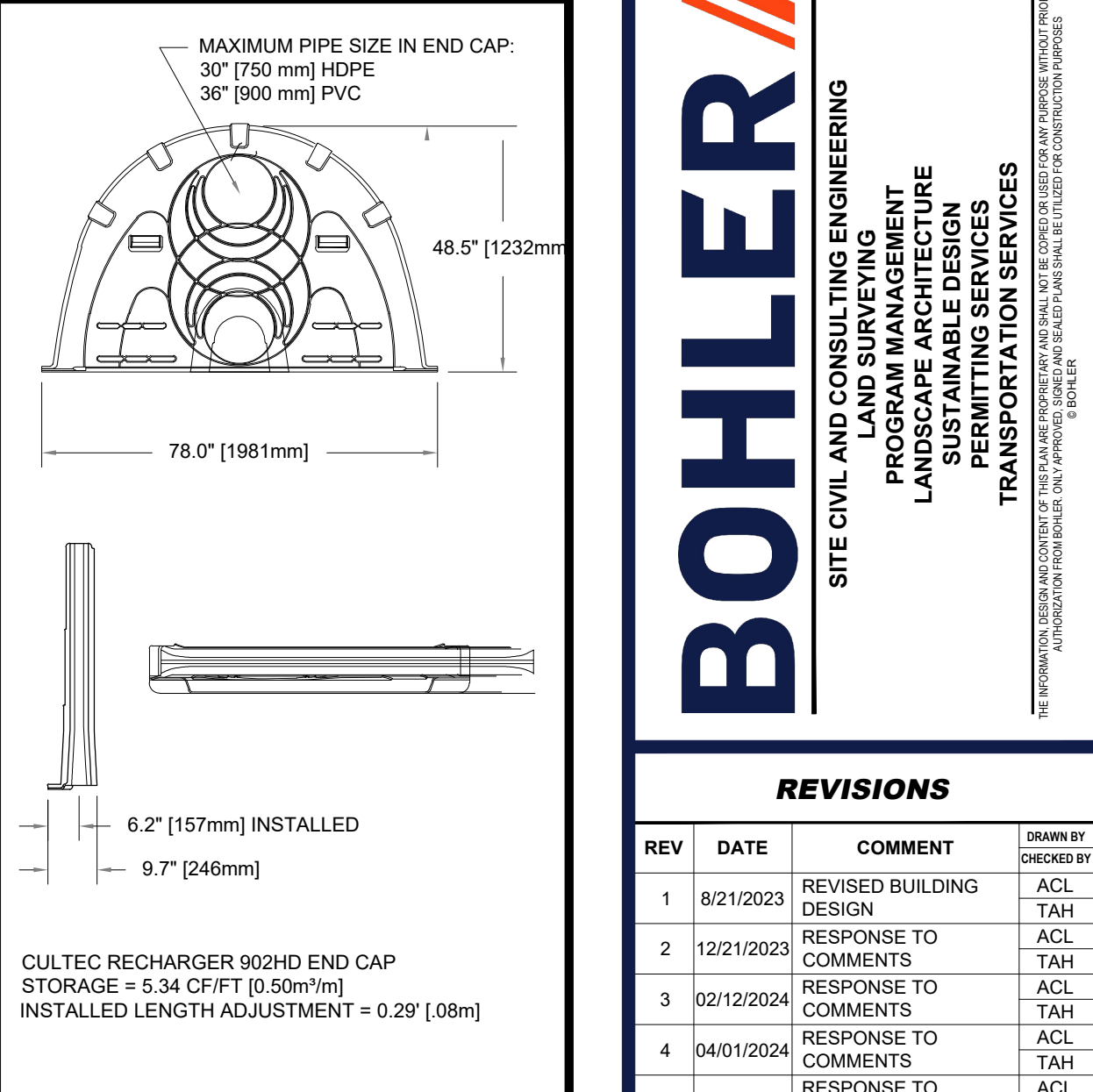
CULTEC RECHARGER 902HD HEAVY DUTY THREE VIEW



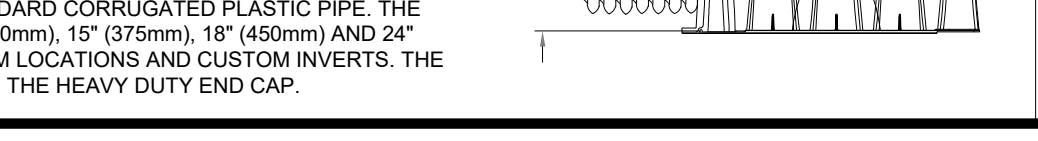
CULTEC RECHARGER 902HD HEAVY DUTY END CAP THREE VIEW



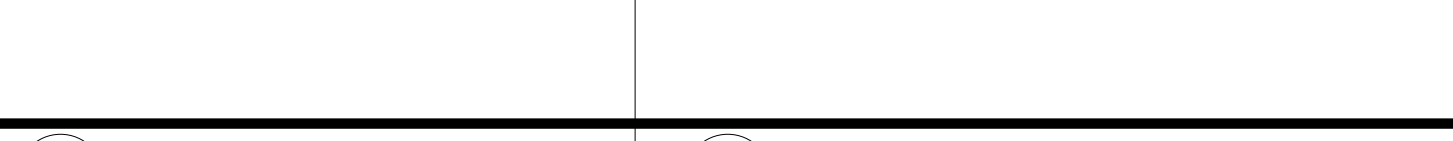
CULTEC RECHARGER 902HD HEAVY DUTY CROSS SECTION



CULTEC RECHARGER 902HD HEAVY DUTY TYPICAL INTERLOCK



CULTEC HVLV FC-48 FEED CONNECTOR THREE VIEW



CULTEC INSPECTION PORT - ZOOM DETAIL



CULTEC INTERNAL MANIFOLD - OPTIONAL INSPECTION PORT DETAIL